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RAFFAELE CIFERRI
(Italian Cryptogamic Laboratory and Botanical Institute, The University, Pavia (Italy).

Meliolae of Santo Domingo (W.I.)

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Meliolae of Santo Domingo (W.I.)

by

RAFFAELE CIFERRI

Italian Cryptogamic Laboratory and Botanical Institute, The University, Pavia (Italy).

(17.6.1953.)

This contribution to the knowledge of the *Meliolae* of Santo Domingo (namely, the Dominican Republic, West Indies) is based chiefly on the collections made by the late, sweedish botanist ERIK LEONARD EKMAN, alone or together with the present author, mostly during the years 1929 and 1930. Types or cotypes or duplicate specimens are conserved in the Herb. REGNELL (Naturhistorische Riksmuseum, Stockholm); a number of duplicates are stored also in the Mycological Herbarium of the U.S. Department of Agriculture of Washington and in the author's herbarium; only a few number were published in the "Mycoflora Domingensis Exsiccata" (see the literature).

Almost all the host plants were determined or controlled by the late Dr. E. L. EKMAN; as a rule, the nomenclature has been based on the MOSCOSO standard, dominican flora [1]).

Distribution of the Meliolae in Santo Domingo

On the map of the world distribution of the biological group of Asterineae (including the Meliolineae), the french mycologist ARNAUD included also the Dominican Republic, as a country with an "asterinoid climate", averaging a yearly rainfall of not less than 1.500 mm. This statement is fully justified, but only a superficial survey demonstrates the irregular, altimetric and planimetric, distribution of this group of fungi.

In spite of the fact that, from the mycological standpoint, the highlands of the Dominican Republic were not systematically explored, two belts are to be considered: 1) from 0 to about 1.000 m., and 2) from 1.000 m. up. "Meliolized" regions are found chiefly in the first belt, in scattered places according to the exposition to the sunshine, the quality and density of the host plants, and other ecological factors. In the second belt, the high relative humidity, nebulosity and fogginess are very favorable to the development of the sooty-moulds; the Meliolineae, if present, are overgrown by these fungi and by a number of symbiotic (the so-called parasitic) fungi, determining the sterility or morphological deviation from the normal structure of the *Meliolae*. Notwithstanding, a number of specimens above 1.000 m. were collected.

The main formation of Santo Domingo, the rain forest, is not favorable to the development of the *Meliolae*, at least in the lower layers of this pluristratified, evergreen forest, averaging from 2.000 to 2.500 mm. of rainfall yearly; reduced penetration of sunshine and wind, high moisture and high density of individuals are favorable to sooty-molds (and, in parte, to common molds), in the group of microfungi. The *Meliolae* are found, as a rule, in the superior layers of the forests (of course, not easily accessible to the botanical collectors), or in open places. Old cleared land and the second-growth forest are particularly

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[1]) Moscoso R. M. (1943) — *Catalogus Flora Domingensis*. I. Spermatophyta. New York.

rich in *Meliolae*, yet poor in number of species, on account of the monotony and vulgarity of the host plants.

The mesophytic forest, with an average of 1.000—1.500 mm. of yearly rainfall, is an half-open forest favorable to the growth of the Meliolineae. Strongly "meliolized" places are found in the open coastal forest, and in the patches of forest builded on the low savannas and grasslands. Good exposition to the sunshine and winds, moderate amount of soil moisture and relative humidity, high temperature are favorable to the development of this group of fungi.

Savannas and grasslands themselves are quite poor of *Meliolae*, with exception of a few, common and well adapted species, growing on members of the family of Cyperacee and Graminaceae, and a few members of the Dicotyledons constituting both formations.

The semi-xerophytic forest, with 1.000 mm. or less of rainfall, distributed only in well defined rain periods, is favorable to the growth of the *Meliolae*, but only during the rainy seasons (April to June, and September to November), so that, at least for a number of species, the presence of these fungi is discontinuous. A number of other *Meliolae* are growing during all the year on host plants, as, on *Ipomoea* and related species, *Casearia, Hura, Sabal, Tabebuia*, a number of Leguminosae, and so on. Second-growth forests of semi-arid regions are scarcely favorable to the development of the *Meliolae*, with exception of a few species.

The xerophytic forest is clearly unfavorable to the growth of species of this group of fungi, with a few exceptions for host plants established in more moist places, and also for a number of well adapted, specialized species, as, e.g., on *Guajacum, Coccoloba, Croton, Serjania, Stigmatophyllum*, etc.

Species of Spermatophytae of the pine forest are "meliolized" almost only in the low pinelands, chiefly in moist places; no Meliolineae are found on *Pinus occidentalis* itself.

At last it must be observed that the distribution of *Meliolae* is, to sum up, very irregular, also in places apparently well adapted for host plants and ecological conditions; a great surface may be very poor in these fungi, while the same host plants in other places (also on a few squared meters of surface) are so densely parasitized, that is difficult to find a single leaf without *Meliolae*. The cause of this highly localized, "meliolized" places, is yet unknown.

Distribution of Meliolae in the Dominican Republic

For the large number of collections of *Meliolae* on the reduced area of the Dominican Republic, a few conclusions may be sketched on the distribution, with the reserve for the modifications related with the future collections.

No *Meliolae* are found on Gymnospermae (Cycadaceae, Taxaceae and Pinaceae families), probably also on account of the ecological environment.

The *Meliolae* are never found on aquatic or semi-aquatic plants (families Potamogetonaceae, Najadaceae, Alismaceae, Butomaceae, Hydrocharitaceae, Lemnaceae, Typhaceae, Xyridaceae, Pontederiaceae, Nympheaceae, Ceratophyllaceae, Lentibulariaceae, etc.).

As it has been observed formerly, *Meliolae* are not typically found on montain forest, or, more generally, in montane belts. In consequence, these fungi are absent in members of the families Chloranthaceae, Cunoniaceae, Ranunculaceae, Rosaceae, Sabiaceae, Hypericaceae, Cistaceae, Violaceae, Begoniaceae, Umbelliferae, Primulaceae, Ebenaceae, Symplocaceae, Styracaceae, Loganiaceae, Gesneriaceae, Valerianaceae, etc.

The *Meliolae* are found only on indigenous species, not at all on introduced, cultivated or adventitious species; also ruderal or anthropophilous species are not favorable to the growth of Meliolineae. In the Dominican Republic these fungi are never found on members of the families Pandanaceae, Amaranthaceae, Chenopodiaceae, Nyctaginaceae, Phytolaccaceae, Myristicaceae, Cruciferae, Moringaceae, Saxifragaceae, Geraniaceae, Balsaminaceae, Bixaceae, Caricaceae, Lecythidaceae, Punicaceae, Pedaliaceae, Martyniaceae, Caprifoliaceae, etc. The most conspicuous exception is *Meliola mangiferae*, very frequent on the cultivated, asiatic *Mangifera indica*. Also species diffusely cultivated in the rain forest environment, as the *Musae*, are free from Meliolineae; but are free also apparently indigenous species of the same forest as, e.g., *Heliconia*. Apparently a great number of cultivated, perhaps indigenous plants, are also free from *Meliolae*.

Sclerophyllous and crassulent plants are also free from *Meliolae* (Bromeliaceae, Amaryllidaceae, Portulacaceae, Cactaceae; probably also Commelinaceae, Cannaceae, etc.), as well as achlorophyllian species (Burmanniaceae). But a number of other sclerophyllous species are more or less parasitized as, e.g., Graminaceae, Cyperaceae, Liliaceae, Zingiberaceae, Orchidaceae, Marantaceae, Loranthaceae, Capparidaceae, Palmae, Theophrastaceae, Sapotaceae, Zygophyllaceae, Myrtaceae, Clusiaceae, Magnoliaceae, Myricaceae, etc.; in a number of families with more or less sclerophyllous leaves the *Meliolae* are frequent or diffuse (Polygonaceae, Lauraceae, Anacardiaceae, Buxaceae, Malpighiaceae, etc.). The *Meliolae* are not found on Rhizophoraceae, but are frequent on the mangroves of the Combretaceae family.

The *Meliolae* are a few in number or poorly distributed on members of the families Piperaceae (with a few exceptions), Moraceae (id.), Urticaceae (id.), Aristolochiaceae, Leguminosae, Erythroxylaceae, Vitaceae, Elaeocarpaceae, Malvaceae, Bombacaceae, Dilleniaceae, Ochnaceae, Turneraceae, Passifloraceae Ericaceae, Oleaceae, Gentianaceae, Scrophulariaceae, Acanthaceae, Cucurbitaceae, Labiatae, etc. Irregularly distributed are on members of the families Araceae, Annonaceae, Myrsinaceae, Euphorbiaceae, Aquifoliaceae, Celastraceae, Tiliaceae, Sterculiaceae (but not on cacao tree, a South American species), Ternstroemiaceae, Canellaceae, Combretaceae, Apocynaceae, Asclepiadaceae, Borraginaceae, Verbenaceae, Bignoniaceae, Compositae, etc.

Frequent or diffuse are on species of the following families, including a number of small ones: Olacaceae, Hernandiaceae, Connaraceae, Rutaceae (but not on cultivated species), Burseraceae, Meliaceae, Malpighiaceae, Cyrillaceae, Hypocrateaceae, Icacinaceae, Staphyleaceae, Sapindaceae (indigenous), Rhamnaceae, Marcgraviaceae, Flacourtiaceae, Melastomataceae, Araliaceae, Convolvulaceae, Solanaceae, Rubiaceae (not on the african coffee tree), etc.

With some difficulty we could explain the absence of the *Meliolae* on members of the Caryophyllaceae, Papaveraceae, Goodeniaceae, Eriocaulaceae, Crassulaceae families, but we are unable to explain the absence on members of the Ulmaceae, Aizoaceae, Menispermaceae, Krameriaceae, Hydrophyllaceae, Campanulaceae and Lobeliaceae families.

In our opinion, it is possible that a knowlegde of the origin and age of species of the Dominican flora, could better explain the distribution of the Meliolineae.

Host plants and specialization

As explained above, one of the most striking observation is that *Meliolae*, as a general rule, are not living on foreign, introduced and cultivated species; for Santo Domingo the only exceptiond are for the species living on *Melicocca*

bijuga, Mangifera indica and *Persea americana* (not to mention half-cultivated or protected local plants); the most important, not indigenous crops are free from these fungi. If the *Meliolae* are to be considered as auxiliary, biological "reagents" for the determination of the indigenate of species, is a matter for future observation.

The *Meliolae,* in spite of the fact that it is completely or almost completely epiphytic (or, at least, very weak parasitic in life) appears to be highly specialized with regard to the host plants, judging from the variation of the morphological characteristics of Meliolineae on host plants growing together. If most species are ectophytic in life, growing on the cuticle or the epidermid of the leaf, a very reduced number is clearly parasitic, a scanty mycelium interesting the first layers of the parenchymatic tissue, and evident also for the discolorized spots on the leaf. If certain families are preferently "meliolized", and certain not at all, the distribution of this group of fungi according the genera and species of host plants is completely erratic. A number of species of *Meliolae* are, topographically, almost ubiquitarious, but frequent to rare or collected only once, indipendently of the distribution of the host plants.

The evolutive trend in the Meliolae

The trend on the evolution in this group of fungi may be observed in the colonies of *Meliolae* partially overgrown by other fungi, chiefly Hyphales, their presence being marked by a gradual reduction of a number of morphological characteristics, as frequently observed in different colonies of the same species living on the same leaf or on leaves of the same branch.

The first — and evident — effect is the reduction in the lenght or number of setae, mycelic or perithecial or both, up to the total — or almost total — disappearance; the reduction in number of mucronate hyphopodia, eventually disappearing together; at last the reduction in number of the capitale hyphopodia. In many cases, also a regressive morphology of the hyphopodia (at first of the mucronate, then of the capitate ones) is evident. As a rule "parasitized" colonies are sterile, without perithecia or with empty perithecia. Frequently, a very weak "parasitization" is sufficient for a more or less marked sterility of the colony.

The uncertain constancy of the presence of the setae is confirmed by the fact that not completely developed *Meliolae,* though with asci and spores, are frequently poor in setae; also old colonies of setose *Meliolae* are, as a rule, more or less glabrous.

From the general evidence, the evolutive trend in the morphology of *Meliolae* is characterized, from the most complex to the poorest forms, by the following steps:

1) Completely setose *Meliolae;*
2) *Meliolae* partially setose (either with perithecial or mycelic setae);
3) Glabrous *Meliolae.*

The position of the *Meliolae* with vermiform appendages is yet uncertain (see below).

The apparent evolution from the highest to the least differentiated forms, as observed in a number of vegetative organs, appears to be as follows:

Setae: 1) many-branched; 2)2- to 3- furcate; 3) dentate, clavate or hamate 4) simple, from obtuse to acute. Frequency, size and position of the setae are, apparently, without relation to the evolutive trend of the *Meliolae.*

Hyphopodia: 1) Capitate hyphopodia very abundant, contiguous, as a

rule deeply lobate, with a relatively long and distinct stalk-cell; mucronate hyphopodia abundant, not mixed with the capitate, more or less clearly bottle-shaped; 2) capitate hyphopodia less abundant, not contiguous but single and scattered, of simpler shape, as, e.g., cylindric, conic-truncate, spathulate, etc., slightly or not lobate, stalk-cell evident but shorter; mucronate hyphopodia abundant or scarce, more or less bottle-shaped, frequently mixed with the capitale hyphopodia; 3) capitate hyphopodia spheric or spheroidal (also ellipsoid or ovate), more or less widely scattered, stalk-cell short or absent; mucronate hyphopodia absent or a few in number, sub-elliptic to sub-cylindric, up to confusely bottle-shaped; not rarely capitate and mucronate hyphopodia unclearly distinguishable.

Position and size of the capitate hyphopodia are apparently without relation to the evolutive trend of the group.

In many respect, it is notable a fact: that the evolutive morphology is evident in the above quoted vegetative organs, not in the reproductive organs; as matter of fact, only a few are the differential characteristic of the perithecial structure (e.g. basal disk present or absent; structure rough to almost smooth, and so on), and none in the asci, as a rule diffluent and not easily observable; the number of the septa of the spore, variable from 3 to 4, is but of little value as taxonomic characteristic, as well as color, shape and narrowing at the septa of the spores. More detailed study of the perithecium as related to the presence and structure of the subicle is needed.

Mycelic hyphae and segments are offering a number of minor distinctive characteristics, but an evolutive trend is not easily distinguishable.

Sum up, the position of the capitate hyphopodia (alternate or unilateral, opposite or both opposite and alternate) is a morphological characteristic appearing of notable constancy, and it is surprising that it has not been fully utilized by STEVENS, TEHON, BEELI and other eminent specialists of the *Meliolae*, together with setae, shape and size of a number of organs.

Meliola and allied genera

In this review, we do not recognize the genera *Actinodothis* H. et P. Sydow and *Amazonia* Theiss., which relationship with true *Meliolae* is doubtful (and both genera are unclearly differentiated), as well as the genus *Meliolina* H. et P. Syd. (a *Meliola* without capitate hyphopodia), a confused genus.

The first tentative to split up the old, Friesan genus *Meliola*, has been made by VON HÖHNEL (Sitzber. K. Akad. Wiss. Wien, Math.-Naturw. Kl., Vol. CXXVIII, pag. 556. 1919) establishing the genus *Appendiculella*, characterized by the possession of vermiform appendages on the perithecium, but without setae, followed by *Irene* Theiss. et Syd. that in the STEVENS' classical monograph (I. Ann. Mycol., Vol. XXV, pag. 405—469. 1927, and II. Ibid., Vol. XXVI, pag. 165—353. 1928) is synonym of *Appendiculella*. In the same monograph, STEVENS established the genus *Irenopsis*, characterized by the presence of perithecial setae and the absence of mycelic ones, and *Irenina* Stev. completely devoid of setae (then identic with *Irene* Theiss. and Syd. in his original signification). Thus *Meliola* Fries emend. Stev. has been characterized by species with myceliar setae, and with or without perithecial setae.

The treatment of the late mycologist STEVENS has been generally followed by the mycologists, but in our illustration of the Third Century of the "Mycoflora Domingensis Exsiccata" we proposed the reconstitution of the old, incontenstable unity of the Friesan genus *Meliola*, considerating the derivated genera as subgenera:

Sub-genera of Meliols Fr.

A. Mycelium setose.
- a) Perithecia not setose . . . . . *Eumeliola* Cif.
- b) Perithecia setose . . . . . *Chaetomeliola* Cif.

B. Mycelium glabrous.
- a) Perithecia showing vermiform appendages. . . . *Irene* (Th. et Syd. emend. Stev.) Cif
- b) Perithecia without vermiform appendages
  - I. Perithecia setose. . . . . *Irenopsis* (Stev.) Cif.
  - II. Perithecia glabrous . . . . . *Irenina* (Stev.) Cif.

Sections of the sub-genera

A. Capitate hyphopodia opposite. . . . . Opposita Cif.
B. Capitate hyphopodia alternate (or unilateral) . . . Alternantia Cif.
C. Capitate hyphopodia opposite or alternate. . . . . Composita Cif.

In this review, this scheme has been followed.

In the year 1938, we wrote:

"In relation to the specialization of *Meliolae*, cross-inoculation experiments performed by the writer failed to show positive evidence of infection. A comparative study, from the morphological standpoint, was made on all Meliolineae growing on all host plants found in two small but strongly "meliolized" areas, taking in consideration the topographical distribution of host plants and their respective fungi. The result indicates that the Meliolineae are apparently highly specialized fungi, so that the systematic position of the host plants, as related to the definition of species of *Meliolae*, must be considered, but within the limits of the host-plants families only, this limitation being provisional and artificial".

Abbreviations

The figures not followed by other metric indication are expressing the measure in μ (microns).

Species or varieties new to the science are marked with two asteriskes (**) and in **BOLD CAPS** type. Species, and varieties new to Santo Domingo (Dominican Republic) are marked with one asterisk (*). New combinations are in **BOLD CAPS** type, but not asterisked.

E. L. E. is indicating E. L. Ekman, and R. C. the author of the present paper.

In the descriptions the sign μ (for microns) is omitted.

Appendix

In addition to the new combination made on Dominican fungi previously described as *Irene*, *Irenina* and *Irenopsis*, the following other species are transferred to the genus *Meliola*:

MELIOLA SPLENDENS (Stev.) = *Irene splendens* Stev.; *M. sororcula* Speg. var. VERNONIAE (Stev.) = *Irene sororcula* (Speg.) Stev. var. *vernoniae* Stev.; *M. larviformis* P. Henn. var. ARECIBENSIS (Stev.) = *Irene larviformis* (P. Henn.) Stev. var. *arecibensis* Stev.; M. ADELPHICA (H. Syd.) = *Appendiculella adelphica* H. Syd. = *Irene adelphica* Stev.; M. PAPILLIFERA (H. et P. Syd.) = *Irene papillifera* H. et P. Syd.; M. INGAE (Stev. et Teh.) = *Irene ingae* Stev. et Teh. = *Irenopsis ingae* Stev.; M. SCAEVOLICOLA (Stev.) = *Irene scaevolicola* Stev. =

Irenopsis scaevolicola Stev.; M. COSTARICENSIS (Stev.) = *Irenopsis costaricensis* Stev.; M. CONOSTEGIAE (Stev.) = *Irenopsis conostegiae* Stev.; M. CROTONIS (Stev. et Teh.) = *Irene crotonis* Stev. et Teh. = *Irenopsis crotonis* Stev.; M. BIGNONIACEARUM (Stev.) = *Irenopsis bignoniacearum* Stev.; M. ABNORMIS (Theiss.) = *Meliola pulchella* Speg. var. *abnormis* Theiss. = *Irenina abnormis* Stev.; M. DALECHAMPIAE (Stev.) = *Irenina dalechampiae* Stev.; M. AMOENA (H. Syd.) = *Irene amoena* H. Syd. = *Irenina amoena* Stev.; M. COLUBRINAE (Stev.) = *Irenina colubrinae* Stev.; M. MONNINAE (Stev.) = *Irenina monninae* Stev.; M. ALCHORNEAE (Stev. et Teh.) = *Irene alchorneae* Stev. et Teh. = *Irenina alchorneae* Stev.; M. SHROPSHIRIANA (Stev.) = *Irenina shropshiriana* Stev.; M. PARASITICA (Stev.) = *Irenina parasitica* Stev.; M. MEIBOMIAE (Stev.) = *Irenina meibomiae* Stev.; M. COSTI (Stev.) = *Irenina costi* Stev.; M. CUBITELLA (Stev. et Teh.) = *Irene cubitella* Stev. et Teh. = *Irenina cubitella* Stev.; M. ANGURIAE (Stev.) = *Irenina anguriae* Stev.; M. CYRTANDRAE (Stev.) = *Irene cyrtandrae* Stev. = *Irenina cyrtandrae* Stev.; M. IMPLICATA (Doidge) = *Irene implicata* Doidge = *Irenina implicata* Stev.; M. LONGIPEDICELLATA (Stev.) = *Irenina longipedicellata* Stev.; M. CHEIRODENDRONIS (Stev.) = *Irene cheirodendronis* Stev. = *Irenina cheirodendronis* Stev.; M. TRACHYLLAENA (H. Syd.) = *Irene trachyllaena* H. Syd. = *Irenina trachyllaena* Stev.; M. CUBITORUM (Stev. et Teh.) = *Irene cubitorum* Stev. et Teh. = *Irenina cubitorum* Stev.; M. ZEYHERI (Doidge) = *Irene zeyheri* Doidge = *Irenina zeyheri* Stev.; M. RINOREAE (Doidge) = *Irene rinoreae* Doidge = *Irenina rinoreae* Stev.; M. NUXIAE (H. Syd.) = *Irene nuxiae* H. Syd. = *Irenina nuxiae* Hansf.; M. PEDDIEAE (Doidge) = *Irenina peddieae* Doidge; M. CALLICARPAE (Stev. et Rold.) = *Irenina callicarpae* Stev. et Rold.; M. FIDELIS (Toro) = *Irenina fidelis* Toro; M. RUBI (Stev. et Rold.) = *Irenina rubi* Stev. et Rold.; *M. rubi* (Stev. et Rold.) var. ANGULATA (Stev. et Rold.) = *Irenina rubi* Stev. et Rold. var. *angulata* Stev. et Rold.; M. SINUOSA (Stev. et Rold.) = *Irenina sinuosa* Stev. et Rold.; M. THUMBERGIAE (Stev. et Rold.) = *Irenina thumbergiae* Stev. et Rold.; M. ANGUSTISPORA (Stev. et Rold.) = *Irenopsis angustispora* Stev. et Rold.; M. *angustispora* (Stev. et Rold.) var. LAEVIS (Stev. et Rold.) = *Irenopsis angustispora* Stev. et Rold. var. *laevis* Stev. et Rold.; M. BENGUETENSIS (Stev. et Rold.) = *Irenopsis benguetensis* Stev. et Rold.; *M. coronata* Speg. var. PHILIPPINENSIS (Stev. et Rold.) = *Irenopsis coronata* (Speg.) Stev. var. *philippinensis* Stev. et Rold; M. PITTIERI (Toro) = *Irenopsis pittieri* Toro = *Irenina pittieri* Garcés Orejuela; M. TROMPILLIANA (Toro) = *Irenopsis trompilliana* Toro; *M. inermis* Kalchbr. et Cooke var. MINOR (Hansf. et Stev.) = *Irene inermis* (Kalchbr. et Cooke) Theiss. et Syd. var. *minor* Hansf. et Stev.; M. BERSAMAE (Hansf.) = *Irenina bersamae* Hansf.; M. ENTEBBEENSIS (Hansf. et Stev.) = *Irenina entebbeensis* Hansf. et Stev.; M. FICI (Hansf.) = *Irenina fici* Hansf.; M. HANSFORDII (Stev.) = *Irenina hansfordii* Stev.; M. HARUNGANAE (Hansf.) = *Irenina harunganae* Hansf.; *M. coronata* Speg. var. HIBISCI (Hansf.) = *Irenopsis coronata* (Speg.) Stev. var. *hibisci* Hansf.; M. GYMNOSPORIAE (Hansf.) = *Irenopsis gymnosporiae* Hansf.; M. LEEAE (Hansf.) = *Irenopsis leeae* Hansf.; M. ENGELHARDTIAE (Yamam.) = *Irene engelhardtiae* Yamam.; M. FORMOSENSIS (Yamam.) = *Irene formosensis* Yamam.; M. KIRAIENSIS (Yamam.) = *Irene kiraiensis* Yamam.; M. MUSYAENSIS (Yamam.) = *Irene musyaensis* Yamam.; M. PHOTINICOLA (Yamam.) = *Irene photinicola* Yamam.; M. STRANVAESIICOLA (Yamam.) = *Irene stranvaesiicola* Yamam.; M. STYRACICOLA (Yamam.) = *Irene styracicola* Yamam.; M. EBULI (Yamam.) = *Irenina ebuli* Yamam.; M. MALLOTICOLA (Yamam.) = *Irenina malloticola* Yamam.; M. NAUCLEAE (Boedijn) = *Irenina naucleae* Boedijn; M. RHAPHIOLEPIS (Yamam.) = *Irenina rhaphiolepis* Yamam.; M. RHODODENDRI (Yamam.) = *Irenina rhododendri* Yamam.; M. TURPINIAE

(Yamam.) = *Irenina turpiniae* Yamam.; M. SINSUIENSIS (Yamam.) = *Irenopsis sinsuiensis* Yamam.; M. EKEBERGIAE (Doidge) = *Irene ekebergiae* Doidge = *Irenina ekebergiae* Hansf. et Deight.; M. UGANDENSIS (Hansf.) = *Irene ugandensis* Hansf. = *Irenina ugandensis* Hansf. et Deight.; M. GLYPHAEAE (Hansf.) = *Irenina glyphaeae* Hansf.; M. MASAKENSIS (Hansf.) = *Irenopsis masakensis* Hansf.; M. CHANDLERI (Hansf.) = *Irenopsis chandleri* Hansf.; M. MACARANGAE (Hansf.) = *Irenopsis macarangae* Hansf.; M. HANSFORDIANA n.nom. = *Irenina masakensis* Hansf.; M. ANTIDESMAE (Hansf.) = *Irenina antidesmae* Hansf.; M. DUPLICATA n.nom. = *Irenina caseariae* Hansf. non M. Petr. et Cif.; M. SYZYGII (Hansf.) = *Irenina syzygii* Hansf.; M. VACCINII (Hansf.) = *Irene vaccinii* Hansf.; M. AGAURIAE (Hansf.) = *Irenina agauriae* Hansf.; M. BAKERIANA (Hansf.) = *Irenina bakeriana* Hansf.; M. ENTANDROPHRAGMAE (Hansf.) = *Irenina entandrophragmae* Hansf.; M. ERYTHROCOCCAE (Hansf.) = *Irenina erythrococcae* Hansf.; M. HARUNGANICOLA (Hansf.) = *Irenina harunganicola* Hansf; M. LOVOAE (Hansf.) = *Irenina lovoae* Hansf.; M. MYRICICOLA (Hansf.) = *Irenina myricicola* Hansf.; M. PIPERICOLA (Hansf.) = *Irenina pipericola* Hansf.; M. STROMBOSIAE (Hansf.) = *Irenina strombosiae* Hansf.; M. CALONCOBAE (Hansf.) = *Irenopsis caloncobae* Hansf.; M. COLAE (Hansf.) = *Irenopsis colae* Hansf.; M. LAGUNAE (Hansf.) = *Irenopsis lagunae* Hansf.; M. SCUTIAE (Hansf.) = *Irenopsis scutiae* Hansf.; M. ARISANENSIS (Yamam.) = *Irene arisanensis* Yamam.; M. CASTANOPSIFOLIA (Yamam.) = *Irene castanopsifolia* Yamam.; M. CYCLOBALANOPSICOLA (Yamam.) = *Irene cyclobalanopsicola* Yamam.; M. KONISHII (Yamam.) = *Irene konishii* Yamam.; M. LITHOCARPICOLA (Yamam.) = *Irene lithocarpicola* Yamam.; M. YAMAMOTOI n.nom.= *Irene sinsuiensis* Yamam. M. EUCLEAE (Hansf.) = *Irenina eucleae* Hansf.; M. HYDRANGEAE (Yamam.) = *Irenina hydrangeae* Yamam.; M. LONICERAE (Yamam.) = *Irenina lonicerae* Yamam. (etiam Hansf.); M. PITHECOLOBII (Yamam.) = *Irenina pithecolobii* Yamam.; M. SECURIDACAE (Hansf.) = *Irenina securidacae* Hansf.; M. HIPTAGES (Yamam.) = *Irenopsis hiptages* Yamam.; *M. styracicola* (Yamam.) var. MINOR (Hansf.) = *Irene styracicola* Yamam. var. *minor* Hansf.; M. BUDDLEIAE (Hansf.) = *Irenina buddleiae* Hansf.; M. CASTANOPSIDIS (Hansf.) = *Irenina castanopsidis* Hansf.; M. CHEOI (Hansf.) = *Irenina cheoi* Hansf.; M. MALLOTI (Hansf. et Thirum.) = *Irenina malloti* Hansf. et Thirum.; M. POTHODIS (Hansf. et Thirum.) = *Irenina pothodis* Hansf. et Thirum.; M. QUERCINA (Hansf.) = *Irenina quercina* Hansf.; M. ROSAE (Hansf.) = *Irenina rosae* Hansf.; M. MYSORENSIS (Hansf. et Thirum.) = *Irenopsis mysorensis* Hansf. et Thirum.; M. ANTHOCLEISTAE (Hansf. et Deight.) = *Irenina anthocleistae* Hansf. et Deight.; M. BARBACENNIAE (Hansf.) = *Irenina barbacenniae* Hansf.; M. CAPPARIDIS (Hansf. et Deight.) = *Irenina capparidis* Hansf. et Deight.; *M. combreti* (Stev.) var. MAJOR (Hansf. et Deight.) = *Irenina combreti* Stev. var. *major* Hansf. et Deight. M. DEIGTONII (Hansf,) = *Irenina deigtonii* Hansf.; M. DIOSPYRICOLA (Hansf. et Deight.) = *Irenina diospyricola* Hansf. et Deight.; *M. hansfordii* (Stev.) var. DENSA (Hansf. et Deight.) = *Irenina hansfordii* Stev. var. *densa* Hansf. et Deight.; M. HIPPOCRATEAE (Hansf. et Deight.) = *Irenina hippocrateae* Hansf. et Deight.; M. PIPTURI (Hansf.) = *Irenina pipturi* Hansf.; M. PLUMERIAE (Hansf. et Deight.) = *Irenina plumeriae* Hansf. et Deight.; M. PREMNAE (Hansf. et Deight.) = *Irenina premnae* Hansf. et Deight.; M. SACOCEPHALI (Hansf. et Deight.) = *Irenina sacocephali* Hansf. et Deight.; M. SYMPHONIAE (Hansf.) = *Irenina symphoniae* Hansf.; M. TERMINALIAE (Hansf. et Deight.) = *Irenina terminaliae* Hansf. et Deight.; M. TETRACERAE (Hansf. et Deight.) = *Irenina tetracerae* Hansf. et Deight.; M. THUNBERGIAE-CHRYSOPIDIS (Hansf. et Deight.) = *Irenina thunbergiae-chrysopidis* Hansf. et Deight.; *M. ugandensis* (Hansf.) var. ANTIARIDIS (Hansf. et Deight.) = *Irenina ugandensis* Hansf. et Deight.

var. *antiaridis* Hansf. et Deight.; M. ACRIDOCARPICOLA (Hansf. et Deight.) = *Irenopsis acridocarpicola* Hansf. et Deight.; M. CATHORNIONIS (Hansf. et Deight.) = *Irenopsis cathornionis* Hansf. et Deight.; M. COLIICOLA (Hansf. et Deight.) = *Irenopsis coliicola* Hansf. et Deight.; M. MALPIGHIAE (Hansf.) = *Irenopsis malpighiae* Hansf.; M. BISMIKANIAE n.nom = *Irenopsis mikaniae* Hansf. et Deight.; M. NJALAENSIS (Hansf. et Deight.) = *Irenopsis njalaensis* Hansf. et Deight.; M. TARRIETIAE (Hansf. et Deight.) = *Irenopsis tarrietiae* Hansf. et Deight.; M. MELOTHRIAE (Baker et Dale) = *Irenopsis melothriae* Baker et Dale; M. HOMALII-ANGUSTIFOLII (Deight.) = *Irenina homalii angustifolii* Deight.; M. PHYLLANTHI (Dieght.) = *Irenina phyllanthi* Deight.; M. BUETTNERIICOLA (Deight.) = *Irenopsis buettneriicola* Deight. M. TAXI (Sawada) = *Irenina taxi* Sawada; M. CASSIAECOLA (Bat. et Silva) = *Irenina cassiaecola* Bat. et Silva; M. TABEBUIAE Bat. et Silva = *Irenina tabebuiae* Bat. et Silva; M. XIMENIAE (Bat. et Silva) = *Irenina ximeniae* Bat. et Silva; M. PROTIICOLA (Bat. et Gayao) = *Irenina protiicola* Bat. et Gayao.

(For bibliographical references see F. Petrak, Indexes of Fungi, republished by The Commonwealth Mycological Institute, Kew, and the Indexes of Fungi from the year 1940 up to-now).

List of the Species

1. * MELIOLA ABRUPTA H. et P. Syd., Ann. Mycol. Vol. XV, pag. 181 (1917).

   On *Pictetia spinifolia* (Desv.) Urb. (Leguminosae), Llano Costero, prov. Santo Domingo, road Ciudad Trujillo to La Caleta, m. 0—5, 10.II.1930. Coll R. C. and E. L. E. (*N° 3082*).

   Known on *Derris* sp. (Leguminosae) only from the type locality (Philippine Islands). The spots of the Dominican fungus are denser than in the type, not cob-webby, distributed in small, black patches of 1—2 mm. diam., frequently covering the entire surface of the leaflet for the confluence of single spots. The fungus studied is localized almost only on the upper surface of the leaflet. The spores are broader (to 20) and the setae longer (to 525) than in the type, the formula of the our specimen being 3113.4223 instead of 3113.4222. See CIFERRI (1939).

2. ** MELIOLA (Irenopsis) ACICULOSA Wint., Hedwigia, Vol. XXV, pag. 98 (1888) var. **VERBENAE** Cif., n.var.

   A typo differt plagulis nigris confluentibus; sporis minoribus (28—32 × 11—15), rarissime 5-septatis; peritheciis majoribus (220—280 diam.), nec non mycelio dense contexto; hyphopodiis capitatis numerosissimis.

   HAB.: in foliis caulibusque *Verbenae domingensis* Urb. (Verbenaceae), Cordillera Central, prov. La Vega, Constanza, m. 1300, 30.X.1920, leg. E. L. E. (*N° 3161*).

   Formula: $\frac{3}{4}$ 401.2230. This variety is similar to the M. *aciculosa* var. *viticis* (Rehm) Stev. found on *Vitex* in Philippine Islands, having the same formula (see below). The specimen at hand is overgrown by an imperfect sooty-mold.

3. * MELIOLA (Irenopsis) ACICULOSA Wint. var. VITICIS (Rehm) Stev., Ann. Mycol., Vol. XXV, pag. 438 (1927).

   On *Vitex integrifolia* Urb. (Verbenaceae), Peninsula de Samaná, Prov. Samaná, Pan de Azucar, 500 m., 5.VIII.1930. Coll. E. L. E. (*N° 4174*).

   The perithecia are 250—350 in diam., and the perithecial setae (few) 150—200 long; the formula, then, is 3401.2230. The Dominican specimen agree quite well with the description of the variety, taking in consideration that it is covered by a *Helminthosporium* sp.

4. MELIOLA ACROTRICHA H. Syd., Leafl. Philipp. Bot., Vol. IX, pag. 3133 (1922).

On *Cupania americana* L. (Sapindaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, VI. 1929. Coll. R. C. (*N° 3004*).

This species up to-date is known on *Trigonachras* (Sapindaceae) only in the type locality (Philippine Islands); the formula is: 3413.4222, and it is closely allied the Dominican fungus (formula: 3413.4232). The setae are longer (more than 400), and both acute and obtuse.

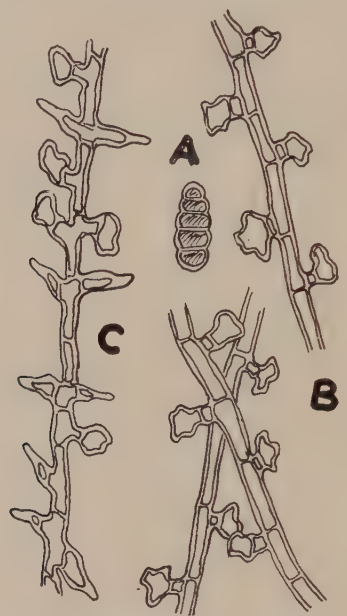

Fig. 1. *Meliola acrotricha* H. Syd. var. *diversiseta* Cif.
a) Ascospore; *b*) Capitate hyphopodia; *c*) Mucronate hyphopodia.

5. ** MELIOLA ACROTRICHA H. Syd., Leafl. Philipp. Bot., Vol. IX, pag. 3133 (1922) var. **DIVERSISETA** Cif., n. var. (Fig. 1).

A typo recedit coloniis nigris, compactis, 5 mm. diam. vel minus, plus minusve late confluentibus efformans; setis biformibus: setis myceliaribus longioribus et crassioribus (690—840 × 10—12), nigris, opacisve; setis perithecialibus minoribus (100—140 × 5—6), subimpellucidis, brunneis; hyphopodia capitata variabilia, capitulo subsphaerico usque irregulari, pro more alternata, rarissime opposita, cellula basilari 6, 5—7, 5. longa; hyphopodia mucronata irregularia, numerosissima, opposita, ampulliformia, 17—20 longa, parte basali 7 crassa, parte apicali 3.

HAB.: in foliis *Serjaniae polyphyllae* (L.) Radlk. (Sapindaceae), Llano Costero, prov. Santo Domingo, Los Alcarrizos, ca.m. 50, 11.II.1930, leg. E. L. E. (*N° 3134*); Cordillera Central, prov. Santo Domingo, Villa Altagracia, 22.II.1930, leg. id. (*N° 3292*).

Formula: 3413.3223. Of the many species of Meliolae found on *Serjaniae* this is the only one showing mycelic setae distinct from the perithecial ones. Quoted by Toro (1927) and Petrak and Ciferri (1930 and 1932) both as *M. ambigua*. On the last specimen, the perithecia are frequently observed with a very few setae, in contrast with the abundant, mycelic setae.

6. MELIOLA ACUTISETA H. et P. Syd., Leafl. Philipp. Bot.; Vol. VI, pag. 1921 (1913) (*"acutisecta"*). (Fig. 2).

On *Misantheca triandra* (Sw.) Mez (Lauraceae), without more detailed informations on the locality, leg. E. L. E. (*No 3307*).

Formula: 3111.3222. Previously found in the Philippine Islands. Mycelic setae abundant, sub-obtuse to acuminate, simple, 270—300 in

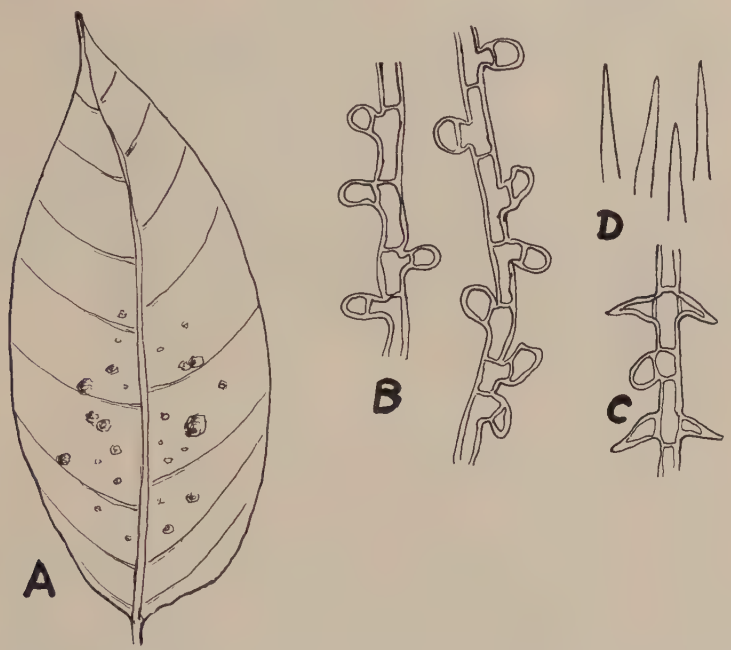

Fig. 2. *Meliola acutiseta* H. et P. Syd. *a*) Habitus of the fungus; *b*) Capitate hyphopodia; *c*) Mucronate hyphopodia; *d*) Tip of the setae.

lenght; perithecia 120—150 in diam.; spores 37—41 × 17—19; capitate hyphopodia normally cylindric, rarely angular, but never lobed, quite uniforme in shape.

This *Meliola* is so heavily overgrown by parasitic fungi that the determination is uncertain. So far as the writer knows, no Meliolinae are found on the genus *Misantheca*. This species was described on *Persea* (Lauraceae) and it has been quoted by ourselves on *Persea domingensis* Mez (rare), also from Santo Domingo (see CIFERRI, 1938), but this record is doubtful.

7. MELIOLA AEGIPHILAE Stev., Ann. Mycol., Vol. XXVI, pag. 208 (1928).

On *Aegiphila elata* Sw. (Verbenaceae), Valle del Cibao, prov. Duarte, Pimentel, roadside from Pimentel to San Francisco de Macoris, VIII. 1929 (without number).

Found on the same genus of host plant in the type locality only (British Guiana), the specimen agree very well with the STEVENS' description. This species is a very beautiful, clearly parasitic *Meliola*; see also CIFERRI (1931).

On the same host plant, see also: *M.* (*Irenina*) *renovata* Cif.

8. ***MELIOLA** (Eumeliola) **AGNOLAE-MARIAE** Cif., n. sp. (Fig. 3).

Coloniis nigris, paucis, isolatis, punctiformibus, minimis, amphigenis;

hyphopodia capitata irregulariter distributa, densa, quasi continua, individualiter semi-indistincta, juxtapposita, obscura, alternantia vel opposita, 10—12 usque 18—25 longa, cellula apicali sphaerica vel subsphaerica, 14—18 × 16—22; hyphopodia mucronata pauca, conica vel conoidea, 14 × 21—25, hyphopodia capitata intermixta; setis my-

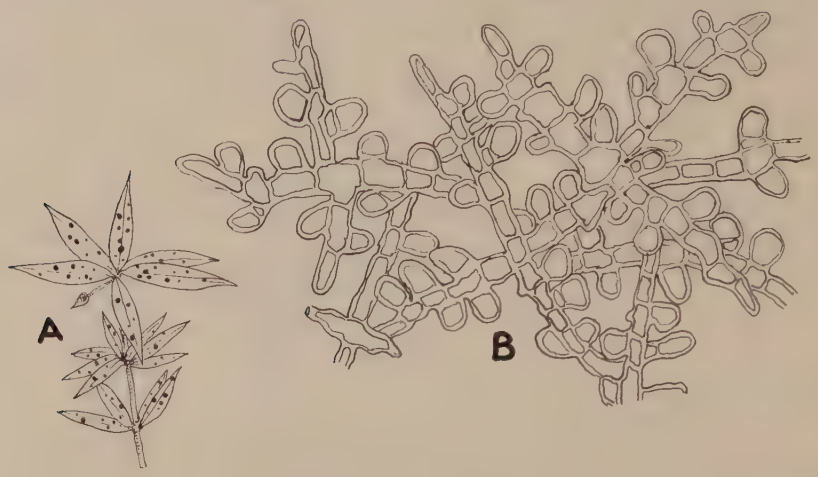

Fig. 3. *Meliola agnolae-mariae* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

celiaribus paucis, isolatis, nigris, opacis, rigidis, plus vel minus rectis, 240—500 × 10—15, acutatis usque sub-obtusis; perithecia nigra, sphaerica, levia, 80—120 diam.; sporis brunneo-nigris, ellipsoideis usque cylindraceis, pro more 4-septatis, 39—47 longis, 18—20 latis.

HAB.: in foliis *Jacquiniae eggersii* Urb. var. *intermediae* Urb. (Theophrastaceae) Valle del Cibao, prov. Santiago, Santiago de los Caballeros, prope El Castillo, 4.X.1930, leg. E. L. E. (*No H/16018*, Phanerog.).

Formula: 3111.4221. Colonies few, apparently poorly developed, blackish to black, small, circular to orbicular, scattered, not confluent nor aggregated, dot-like, 0,2—1 mm. diam., as a rule 0,5—1 mm., dense, compact, adhering to the leaf; mycelium densely interwoved, composed of black-brownish, oppositely branched hyphae, lighter in color at the apex, as a rule straight, very dense, thick or thickened, not clearly septate, 12—14 thick, rarely up to 18 in diam.; capitate hyphopodia very irregularly distributed, as a rule very dense, forming an almost continuous layer, individually quite indistinct, juxtapposed, but in few instances also of normal, regular distribution, dull-brown in color up to blackish, alternate or opposite, exceptionally unilateral, frequently from 18 to 25 long, but also only 10—12, composed of one head cell spheric, ovoid or ellipsoid, as a rule more or less spheric, straight or curved, not lobate nor angulate, simple, 16—22 long, 14—18 wide, stalk cell absent or very short, 2—3 long, rarely to 5, not clearly differentiated; mucronate hyphopodia very scarce, conic, conoid to bottle-shape, thickened at the base, opposite or unilateral, frequently intermixed with the capitate hyphopodia, 21—25 long, 14 thick at the base, 6—7 at the obtuse to subacute tip, myceliar setae exceedingly scarce, scattered, black, opac, rigid, more or less straight, 240—500 long, 15 thick at the base, 10—12 at the tip, base not enlarged, tip from acute to sub-obtuse; perithecial setae absent; perithecia black,

spheric, indistinctly striate, apparently smooth, scarce, scattered, 80—120 diam., deeply lobate at the border; asci not seen; spores ellipsoid, ovate to cylindric, brown-blackish, 4-septate (very exceptionally 3-septate), narrowed at the septa, ends rounded, 39—47 by 18—20; paraphysoid mucose, indistinct.

The species is apparently the first Meliolinea found on the family Theophrastaceae. It is a *Meliola* of the subg. *Eumeliola*, but clearly related to the subgenus *Irenina*, another demonstration of the artificial splitting of the comprehensive, old genus. The species has been dedicated to my wife and mycological collaborator Mrs. ANGELA MARIA BORGNA CIFERRI.

9. MELIOLA AMBIGUA Pat. et Gaill., Bull. Soc. Mycol. France. Vol. IV, pag. 184 (1888).

On *Allophilus cominia* (L). Sw. (Sapindaceae), *Serjania polyphylla* Radlk. (Sapindaceae) and *Casearia guianensis* (Aubl.) Urb. (Flacourtiaceae). See TORO (1927) and PETRAK and CIFERRI (1930).

The variability of the type species is, in the writer's opinion, in relation to the too wide host range. It has been described on Verbenaceae, but extendend to Aristolochiaceae, Bignoniaceae, Convolvulaceae, Euphorbiaceae, Flacourtiaceae, Malvaceae, Melastomataceae and Sapindaceae.

This species, typically found on Labiatae, which formula is 3111.3242, with pyriform, capitate hyphopodia and forming small colonies on leaves, is now heterogeneous. As an effort to narrowing, in part, the host range, the var. *caseariaecola* on *Casearia* is proposed. *M. ambigua* has been attributed to *Lantana trifolia* and possibly to *Serjania polyphylla*; in the last host plant also *M. acrotricha* var. *diversiseta* is found, so that the determination as *M. ambigua* is doubtful.

10. ** MELIOLA AMBIGUA Pat. et Gaill., Bull. Soc. Mycol. France, Vol. IV, pag. 104 (1888) var. **CASEARIAECOLA** Cif., n. var.

A typo recedit peritheciis minoribus (150—250 diam.) et setis myceliaribus majoribus (max. 1000 longis).

HAB.: praecipue in pagina superiore foliorum *Caseariae guianensis* (Aubl.) Urb. (Flacourtiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1931, leg. E. L. E. (*No 2776*).

Our variety is justified by the slight differences quoted in the latin diagnose, as well as for host plant. The original formula from GAILLARD's paper (311?.324?) was completed by STEVENS as 3111.3242; the formula of the new variety is: 3111.3233.

This fungus is completely different from *M. caseariae* Petr. et Cif., an endemic Dominican species, found on *Casearia silvestris*.

11. * MELIOLA AMBOINENSIS H. Syd., Philipp. Journ. Sc., Cl. C Bot., Vol. XXI, pag. 133 (1922).

On *Echites angustifolia* Poir. (Apocynaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, leg. E. L. E. (*N° 2856*).

The Dominican specimen is slightly differing from the original description for the shorter setae (300—350) and narrover, perfectly cylindric spores. The formula is: 3111.3122.

This species has been recorded only in the Philippine Islands on *Aganoma* (Apocynaceae), the formula being: 3111.3223.

12. * **MELIOLA** (Irenina) **AMOENA** (H. Syd.) Cif., n. comb.

Syn. *Irene amoena* H. Syd., Ann. Mycol., Vol. XXIV, pag. 315 (1926).
Irenina amoena Stev., Ann. Mycol., Vol. XXV, pag. 451 (1927).

On *Sloanea berteriana* Choisy (Elaeocarpaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 300, 3.III.1930, coll. E. L. E. (*No 3250*).

Described on *Sloanea faginea*, this is the first record outside Costa Rica. The Dominican specimen agree well with the description, except for the capitate hyphopodia, as a rule, unilateral, rarely opposite and apparently never alternate.

13. MELIOLA AMONICOLA Stev., Ill. Biol. Mon., Vol. II, Pag. 40 (1916).

On *Amomys caryophyllata* Krug et Urb. (Myrtaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*No 2860*).

A quite notable species, quoted for Santo Domingo by PETRAK and CIFERRI, on the same host plant from another locality; previously found in Puerto Rico.

14. MELIOLA AMPHIGENA Stev. et Teh., Mycol., Vol. XVIII, pag. 16 (1926).

On *Borreria laevis* (Lam.) Griseb. (Rubiaceae) also on Central and South America; for the West Indies a few records, but it may be a not uncommon species.

Fig. 4. *Meliola anacardi* Zimm. Tip of the setae.

MELIOLA AMPHITRICHA Fries, Elenchus Fung. No 109 (1828).

Syn. *Sphaeria amphitricha* Fries, Syst. Mycol., Vol. II, pag. 513 (1823)

On *Psidium guajaba* L. (Myrtaceae).

This species, which specific name must be rejected, comprises more than one hundred species of *Meliola*, according STEVENS. Santo Domingan quotations under this binomial on *Psidium* must be referred to *Meliola psidii* Fries.

15. MELIOLA ANACARDI Zimm., Centrlbl. Bakter, II Abth., Vol. VIII, pag. 151 (1902). (Fig. 4).

On *Anacardium occidentale* L. (Anacardiaceae) Tropical Asia and America. A common species; see CIFERRI (1938).

16. MELIOLA ANDIRAE Earle, Bull. N.Y. Bot. Gard., Vol. III, pag. 303 (1905).

On *Andira jamaicensis* (W. Wright) Urb. (Leguminosae), also on Central America and West Indies. A not uncommon species; see CIFERRI (1938).

17. MELIOLA (Irenopsis) ANFRACTA Cif., Ann. Mycol., Vol. XXXVI, pag. 204 (1938). (Fig. 5).

On *Croton angustatus* Urb. and *Croton* sp. (Euphorbiaceae). Endemic. See CIFERRI (1938). A quite rare species.

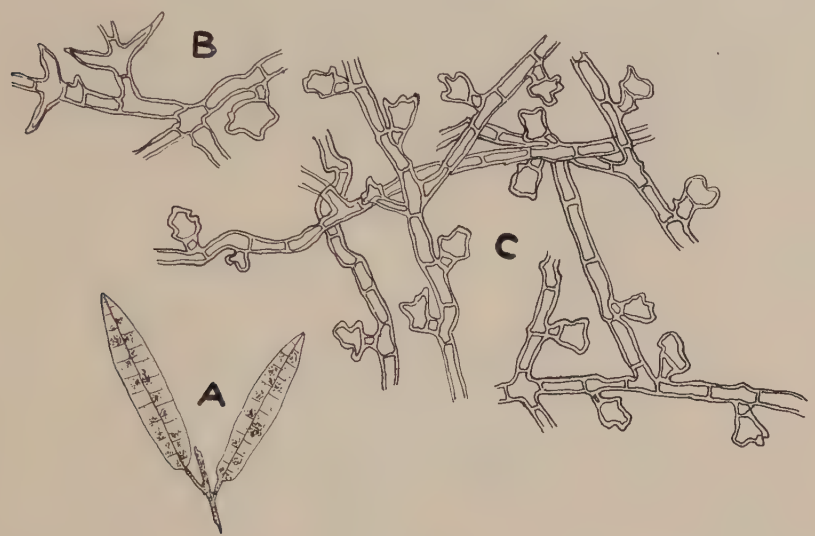

Fig. 5. *Meliola anfracta* Cif. *a*) Habitus of the fungus; *b*) Mucronate hyphopodia; *c*) Capitate hyphopodia.

18. * MELIOLA ANGUSTA Stev. et Teh., Mycol., Vol. XVIII, pag. 6 (1926). (Fig. 6).

On *Coccoloba boergesenii* O. C. Schmidt (*C. ?angustifolia* Ekm. ad interim) (Polygonaceae), Cordillera Central, prov. Monte Cristy, Monción, V. 1929, coll. R. C. (*No 2936*). On *C. ?costata* Ch. Wr., Cordillera Central, prov. Santo Domingo, Villa Altagracia, top of Loma Marián Chicle, m. 825, 6.I.1930, coll. E. L. E. (*No 2863*). On *C. laurifolia* Jacq., Llano Costero, prov. Santo Domingo, La Caleta, m. 5, road to Boca Chica, 10.II.1930, coll. E. L. E. (*No 3140*), and in the same locality, m. 0,20, 10.II.1930, coll. E. L. E. (*No 3295*). On *C. pubescens* L., Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*No 2882*).

A species previously found in the British Guiana, apparently frequent on many species of *Coccoloba* in Santo Domingo, but never on the very common *C. uvifera* L. of the seashore. The specimens agree well with the description of the species, which formula is: 3112.3223. The fungus on *C. ?costata* (formula 3112.5234) appears to be slightly different from the other specimens, for the very densely crooked mycelium, which hyphae are frequently anastomized, greater spores (48—59 × 17—19) and myceliar setae reaching to 656—1200 in lenght. The specimen on *C. pubescens*

formula 3112.4212) differs also for the greater spores (44—48 × 18—20) and shorter mycelic setae (310—330 in lenght). In the writer's opinion, the *Meliola* on this host plant has been reported in Santo Domingo by

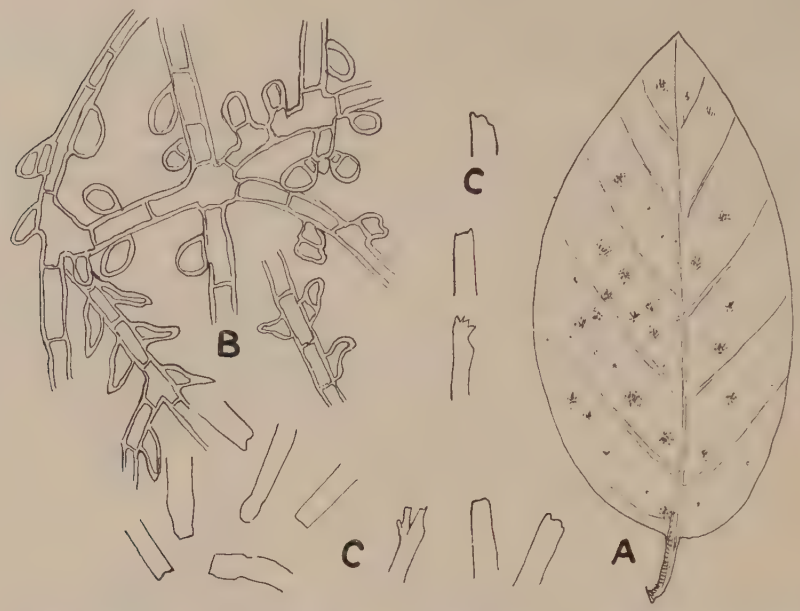

Fig. 6. *Meliola angusta* Stev. et Teh. *a*) Habitus of the fungus; *b*) mycelium with hyphopodia; *c*) tips of the setae.

Toro under *Meliola praetervisa* Gaill., a species having similar opposite capitate hyphopodia, but typically found on Lauraceae.

19. ** MELIOLA ANGUSTA Stev. et Teh. var. **BISERRATA** Cif., n. var. (Fig. 7).

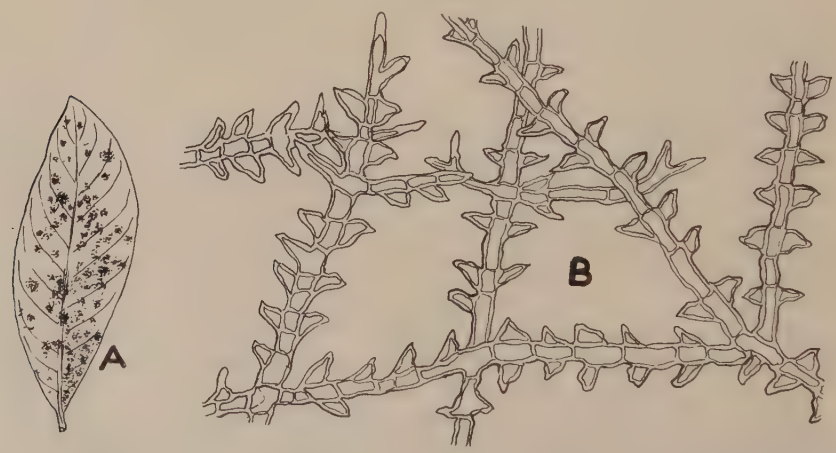

Fig. 7. *Meliola angusta* Stev. et Teh. var. *biserrata* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

A typo differt hyphis myceliaribus nigridulis vel nigris; hyphopodia capitata ex hyphopodiis mucronatis non vel parum distincta, conica,

opposita, dense seriata, 17—19 × 13—15; setis raris usque carentis-bus, *Ireninae* persimilis.

HAB.: in foliis *Leptogonii mollis* Urb. (Polygonaceae), Peninsula de Samaná, prov. Samaná, Samaná, Lagunas, Los Bañaderos Prietos, 500 m. ca., 27.V.1930, leg. E. L. E. (without number).

The fundamental differences from the type species are: hyphae from dull-brown to black; capitate hyphopodia not distinct from the mucronate hyphopodia, conic in shape, stout, with a more less acute (rarely to sub-obtuse) tip, and enlarged base, 17—19 × 13—15, regularly opposite, rarely unilateral, forming a very dense, almost continous series, 7—15 distant; setae exceedingly rare, absent in most of the slide observed, from obtuse to subacute, straight, simple, opac, black, 100—220 long; perithecia brown, quite light in color, distinctly cellulate, 60—90 diam., surrounded at the base by radiating, light-brown, not hyphopodiated hyphae.

Formula: 3112.3211 (formula of the type species: 3112.3233). This variety exagerated many characteristics of the type species; the capitate and mucronate hyphopodia are of the same, conic, stout shape and very dense, so that the mycelium, as see under small magnification, appears

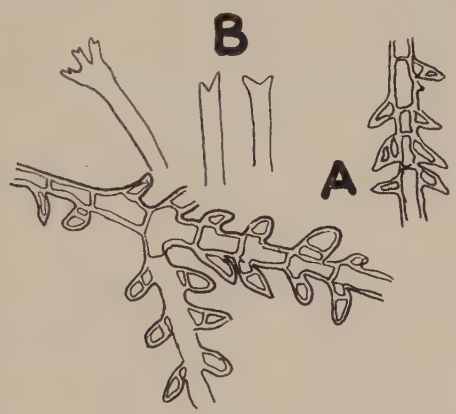

Fig. 8. *Meliola angusta* Stev. et Teh. var. *leptogoni* Cif. *a*) Hyphopodia; *b*) Tip of the setae

disposed as a double row. This variety is clearly allied to *Irenina*, and may be more allied to this subgenus than to the subgenus *Eumeliola*. It is another good example of the inopportunity of the generic fragmentation of the old genus *Meliola* based on the presence or absence of the setae. Also the size of many elements are different from the type species, as well as from the var. *leptogoni* of the same species (see below).

20. MELIOLA ANGUSTA Stev. et Teh. var. LEPTOGONI Cif., Ann. Mycol., Vol. XXXI, pag. 145 (1933). (Fig. 8).

A specie differt setis rectis usque curvatis, obtusis usque dentatis, 590—870 longis, base sub-bulbosa; hyphopodia capitata dense aggregata; sporis 40—44 × 16,5—18.

HAB.: in foliis vivis *Leptogoni domingensis* Benth. (Polygonaceae).

See the english description in the original paper (Ciferri, 1933). Endemic.

21. MELIOLA ANGUSTA Stev. et Teh. var. MACRACANTHA Cif., Ann. Mycol., Vol. XXIX, pag. 284 (1931).

On *Coccoloba olivascens* Ekman (Polygonaceae); see Ciferri (1931).

The examination of a number of specimen on species of the genus *Coccoloba* demonstrated the variability of the lenght of setae and size of spores, so that this variety may better be referred to the tipe species.

22. * MELIOLA ANNONACEARUM Stev., Ann. Mycol., Vol. XXVI, pag. 246 (1928).
On *Oxandra lanceolata* (Sw.) Baill. (Annonaceae), Cordillera Septentrional, prov. Puerto Plata, Sosua, 20.III.1930, coll. E. L. E. (*N° 3221*).
The sterile specimen at hand was determined on the base of the very anastomosized mycelium, striking characteristic of this species. It was recorded on *Annona* only from Ecuador.

23. ** **MELIOLA ARACEARUM** (Stev.) Cif., n. comb. Syn.: *Irenina aracearum* Stev., Ann. Mycol. Vol. XXV, pag. 458 (1927).
On *Dieffenbachia seguine* (Jacq.) Schott. (Araceae).
Previously quoted by CIFERRI and FRAGOSO (1928 under *Irenina*); a common species of the rain forest.

24. MELIOLA (Irenina) ARACHNOIDEA Speg., Bul. Ac. Nac. Ci., Cordoba, Vol. XI, pag. 381 (1889).
On *Triumfetta lappula* L. (Malvaceae); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2775*).
This is a new record on the above named host plant. The species is quite common on many host plants in Central and South America, West Indies and Pacific. It has been quoted by CIFERRI and FRAGOSO (1926, 1928) (sub *Irenina*) on unknown Bignoniaceae, probably *Tabebuia* sp., but the host plant is doubtful, in spite of the fact that the *Meliolae* on Bignoniaceae have been referred many times to this species.

25. MELIOLA ARGENTINA Speg., Ann. Soc. Arg., Vol. IX, pag. 177 (1880).
According HANSFORD (Proc. Linn. Soc. London, Vol. CLX, pag. 137, 1949) this species is associated, in our specimens, with *M. circinans* Earle: apparently, this is a misinterpretation of SPEGAZZINI'S species.

26. MELIOLA ARISTATA Toro, Mycol., Vol. XIX, pag. 74 (1927).
On *Passiflora* sp. (Passifloraceae). Endemic. Quoted by TORO (1927), but not laterly found.

27. * MELIOLA ARISTOLOCHIICOLA Stev., Ann. Mycol., Vol. XXVI, pag. 278 (1928).
On *Aristolochia brachyura* Duchartre (Aristolochiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2817*).
Our specimen is slightly different from the description for the greater, well developed colonies only. This is the first record outside the type locality (Panama).

28. * MELIOLA (Irenina) ATRA Doidge, Trans. Roy. Soc. South Afr., Vol. VIII, pag. 137 (1920).
On *Eugenia procera* (Sw.) Poir. (Myrtaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 17.II.1930, coll. R. C. (*N° 3259*).
The specimen is densely overgrowth by other fungi, so that the determination is not completely sure. The spores are 48—52 × 19—22, the formula being: 3101.5320.

29. MELIOLA (Irenina) ATRICHA (Stev.) Cif., Ann. Mycol., Vol. XXXI, pag. 146 (1933).

On *Myrcia deflexa* (Poir.) P. DC. (Myrtaceae) and *Eugenia* sp. The same species is not infrequent on species of the genus *Eugenia* (e.g. *E. jambos* L., *E. monticola* (Sw.) DC., *E. umbellulifera* (H. B. K.) Krug et Urb.); it has been quoted previously by CIFERRI and FRAGOSO (1928) and CIFERRI (1933).

30. ** MELIOLA BANARAE Stev., Ann. Mycol., Vol XXVI, pag. 249 (1928) var. **ACULEATA** Cif., n. var.

A typo recedit setis majoribus (350—400 × 7,5—8,5), generaliter obtusis, rarius acuminatis; peritheciis minoribus (110—130 diam.), sine disco basali.

HAB.: in pagina superiore foliorum *Casearіae aculeatae* Jacq. (Flacourtiaceae), Llano Costero, prov. Santo Domingo, La Caleta, m. 0—10, 10.II.1930, coll. E. L. E. & R. C. (*N° 3124*) (typus); ibid. Cordillera Septentrional, prov. Puerto Plata, Sosúa, at Jagua-Mocha, 3.IV.1930, leg. E. L. E. (*N° 3313*).

The formula of the type species, described on *Banara* in Panama, is: 3111.4221, and it is clearly allied to our variety (formula 3111.4222). In the writer's opinion, *M. banarae* is allied to *M. ambigua*, but the varieties of the same species on *Casearia* are quite distinct. *M. casearіae* Petr. et Cif. is a clearly different species (formula: 311.5322). *M. paulliniae* Stev. also found on *Casearia*, possess acuminate setae (formula: 3111.3222); this species was typically described on Sapindaceae (see under *M. casearіae*).

The specimen *N° 3313* possess spores 39—42 × 19—21, and only obtuse, shorter setae (220—280), so that the formula constructed on this specimen is very similar to the formula of *M. banarae* (3111—4221 for the type species).

31. ** MELIOLA (Irenopsis) BAYAMONENSIS Teh., Bot. Gaz., Vol. LXVII, pag. 506 (1919) var. **GUETTARDAE** Cif., n. var.

A typo recedit sporis minoribus (18—25 × 7,5—9), fusco-brunneis; setis perithecialibus scarsis, nigris, obtusis, simplicibus, 90—250 × 6—9; coloniis epiphyllis vel sub-epiphyllis, 2—10 m. diam., rarius majoribus, confluentibus, centro nigro, margine griseolo efformantibus.

HAB.: In pagina superiore foliorum *Guettardae* sp. (Rubiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, leg. E. L. E. (*N° 2752*).

Formula of the variety: 3401.2220; formula of the species: 3401.2120. The type species is found only in Puerto Rico on *Psychotria*.

32. MELIOLA BICORNIS Wint., Hedwigia, Vol. XXV, pag. 99 (1886).

Quoted by PETRAK and CIFERRI on *Lonchocarpus longipes* Urb. et Ekm. (Leguminosae) only.

33. MELIOLA BICORNIS Wint. var. CALOPOGONI Stev., Ill. Biol. Mon., Vol. II, pag. 65 (1916).

On *Desmodium adscendens* (Sw.) DC. (Leguminosae), Península de Samaná, Samaná, El Valle, roadside, 6.VI.1930, coll. E. L. E. (*N° 4207*).

This specimen agree well with the short description of the fungus on *Galactia* made by STEVENS, with exception for the length of the spores. The colonies are frequent on the upper side of leaves, quite rare and poorly developed on the lower surface, black, radiato-diffuse, not dense, loose, scattered and sparsely distributed, rarely in part confluent, 1—3 mm. diam.; mycelium composed of hyphae oppositely to irregularly branched,

radiate, quite loose, dull-brown to brown-blackish, which segments are very sinuose, almost sigmoid, 6—9 thick; setae very abundant, black, straight or slightly curved, with a brown or dull-brown obtuse, truncate, rounded or sub-acute tip, not rarely dentate or poorly branched, 145—360 long, 8—12 thick, teeth 3—18 long, capitate hyphopodia opposite, alternate or unilateral, very distinct, 11—23 apart, composed of the head cell spheroid, ovate, ellipsoid, rounded or truncate, never angulate or lobate, 10—18 long at all, head cell 8—12 by 6—10, basal cell, as a rule, evident but short, 3,5—5,5 long; mucronate hyphopodia very scarce, opposite or alternate, mixed with the capitate hyphopodia, very irregularly bottle-shaped, very inflated at the base, narrowed at the tip, 16—19 long, 9—12 tick at the base, 2—3,5 at the free end; perithecia black, rough, carbonaceous, slightly depressed, with sinuate border, 70—175 diam; asci 2—4 spored, very evanescent; spores straight or curved, lenghtened and narrowed, yellow to brown-yellowish, 4-septate, very narrowed at the septa, 32—36 by 12—15.

The formula, according this specimen, is: $31\frac{1}{3}$ 3.3222; while the formula according STEVENS is $31\frac{1}{3}$ 3.4222.

The same variety has been quoted by CIFERRI and FRAGOSO (1927) and PETRAK and CIFERRI (1930) on *Calopogonium orthocarpum* Urb. (= *C. mucunoides* Millsp.) (Leguminosae).

34. MELIOLA BICORNIS Wint., Hedwigia, Vol. XXV, pag. 99 (1886) var. ERYTHRINAE Cif., Ann. Mycol., Vol. XXXI, pag. 146 (1933). (Fig. 9).

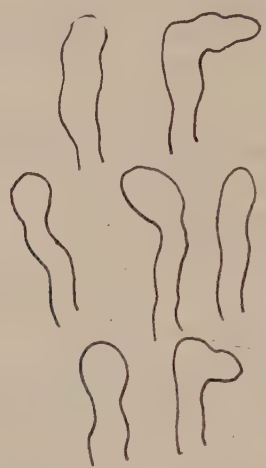

Fig. 9. *Meliola bicornis* Wint. var. *erythrinae* Cif. Tip of the setae.

A typo differt setis semper denticulatis, numquam furcatis, plus vel minus curvatis, numquam uncinatis; hyphopodia capitata sphaerica usque ovata, cellula basali evidenti; sporis 37—44 × 10—12.

On *Erythrina micropteryx* Poepp. [= *E. poeppigiana* (Walp.) O. F. Cook] (Leguminosae). An endemic variety, not frequent; see CIFERRI (1933).

35. MELIOLA BIDENTATA Cooke, Grevillea, Vol. XI, pag. 37 (1882).

This species has been quoted on *Tabebuia berterii* (P. DC.) Britt. and *Tabebuia* sp. (probably a new species) (Bignoniaceae).

New records are: on *Tabebuia berterii*, Llano Costero, prov. Santo Domingo, Manielito, 11.II.1930, coll. E. L. E. (*N° 3121*); id. Ciudad Trujillo, La Caleta, 10 m., 10.II.1930, coll. id. (*N° 3086*); id. road between La Caleta and Boca Chica, 10 m. 10.II.1930, coll. E. L. E. & R. C. (*N° 3079*); on *Tabebuia* sp. Cordillera Central, prov. Santo Domingo, Villa Altagracia, VIII. 1929, coll. R. C. (*N° 2834*); on *T. samanensis* Urb., Cordillera Central, prov. Samaná, Los Haitises, Boca del Infierno, 25.VI.1930, coll. E. L. E. (*N° 4623*); etc.

This species is frequent on species of the genus *Tabebuia* in the Dominican Republic. The examination of a number of specimens revealed the variability of shape and size of the hyphopodia, as well as that of the setae, not to mention the variability of the colonies, so that, in our opinion, the new variety created by HANSFORD (Prov. Linn. Soc. London, Vol. CL, pag. 133. 1949) is not justified. We dont know the material of

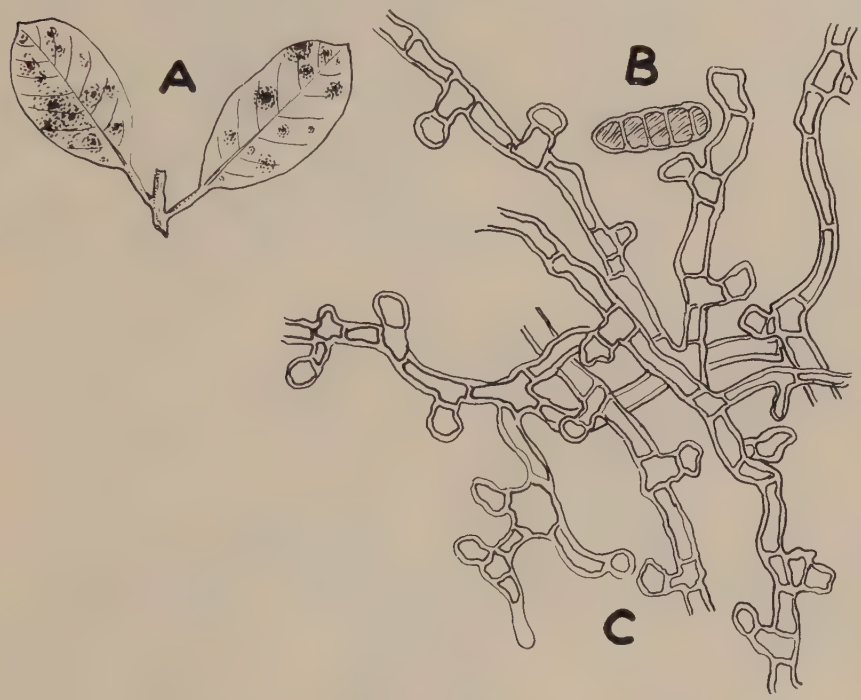

Fig. 10. *Meliola biparasitica* Cif. *a*) Habitus of the fungus; *b*) Ascospore; *c*) Mycelium with hyphopodia.

M. bignoniacearum Stev., but, from the description (and taking in consideration the variability of *M. bidentata*) the STEVENS' species is hardly justifyed. It is possible to accept, instead, *M. distictidis* Hansf. for the *Meliola* on *Distictis* (see), in spite of a wide variability of this material also. The determination of the specimen *N° 2834* is doubtful; most setae are obtuse, not branched.

EKMAN noted (in the label) that *Tabebuia samanensis* is closely related to *T. maxonii* Urb. and growing together the former species, but the latter is free from the *Meliolae*. Found (also on indet. Bignoniacea) by CIFERRI and FRAGOSO; 1926; TORO (1927); PETRAK and CIFERRI (1930); CIFERRI (1931, 1933, 1938).

36. MELIOLA BIPARASITICA Cif., Ann. Mycol., Vol. XXXVI, pag. 205, (1938). (Fig. 10).

On leaves of an undetermined Loranthacea. Endemic; only one record: see CIFERRI (1938).

37. ** **MELIOLA** (Chaetomeliola) **BONAOENSIS** Cif., n. sp. (Fig. 11).

Coloniis nigris, crustosis, singulis, amphigenis, 1,5—3 mm. diam. mycelio fusco, irregulariter ramoso; hyphopodia capitata alternantia vel unilateralia, pauca, isolata, magna, cellula basali bene distincta, 10—16 longa; hyphopodia mucronata pauca, sparsa, opposita vel alternantia, cum

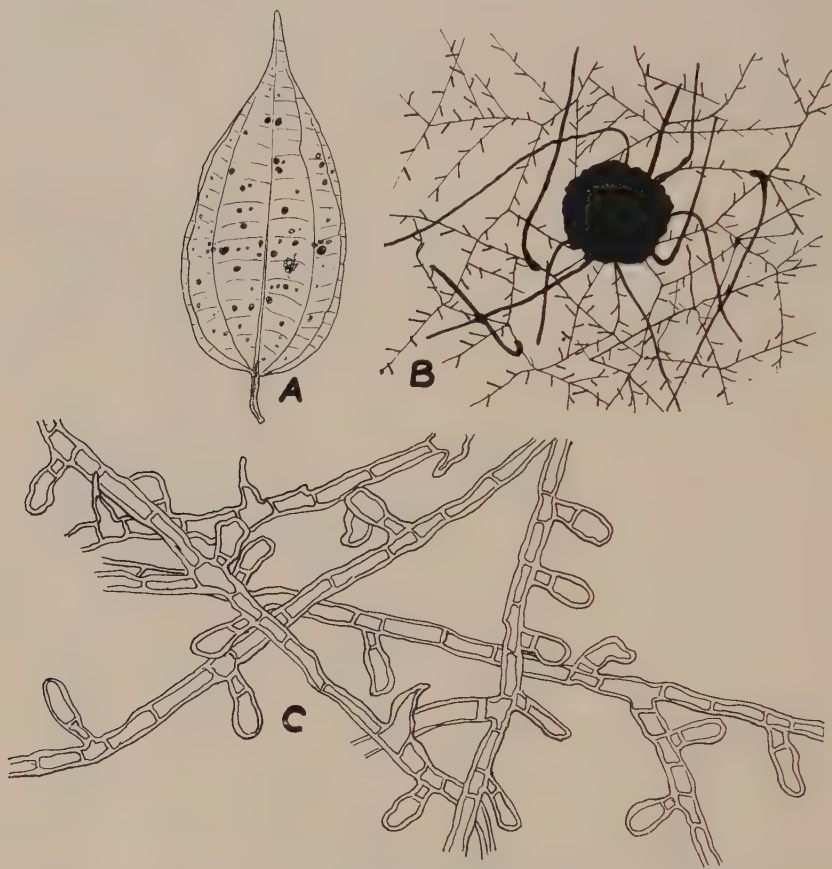

Fig. 11. *Meliola bonaoensis* Cif. *a*) Habitus of the fungus; *b*) Mycelium with setae and perithecia *c*) Mycelium with hyphopodia.

hyphopodiis capitatis intermixta, 20—28 longa; setis myceliaribus paucis, perithecialibus peraffinis; setis perithecialibus nigris, obtusis, variabilibus, 220—450 × 12—15; perithecia sphaerica, nigra, globosa, setis ornata, 145—240 diam.; ascosporis brunneo-nigris, ellipticis usque cylindraceis, 4-septatis, ad septa bene constrictis, 46—54 × 31—27.

HAB.: in foliis *Lunariae* sp. (Flacourtiaceae), Cordillera Central, prov. La Vega, Bonao, Firme del Banilejo, ca. 1050 m., 18.XII.1930, leg. E. L. E. (*N° 4257*).

This is the first species of the subgenus *Chaetomeliola* found on Flacourtiaceae, which formula: 3411.5332.

The colonies are black, crustose or subcrustose, well defined, scattered, rarely almost confluent, amphigenous but, as a rule, found on the upper page of the leaf, orbicular to almost rounded, 1,5—3 mm. diam.; mycelium composed of hyphae brown or dull-brown in color, densely septate, oppositely or irregularly branched, 9—12 diam., straight or sinuate to subangulate; capitate hyphopodia alternate or unilateral, single, irregularly distributed, well evident, head cell elliptic-spathulate, ovoidal or sub-cylindric in shape, simple or subangulate, 16—21 by 14—17, straight or almost curved, basal cell well evident, 10—16 long; mucronata hyphopodia few in number, scattered, opposite or alternate, mixed with the capitate hyphopodia, irregularly ampulliform in shape, 20—28 long, with the base cylindric-inflated, 9—12 diam., with a subacute tip, elongate, straight or curvuled, 3,5—5 diam.; mycelic setae only a few in number, identic with the perithecial setae; perithecial setae black, almost rigid, curvuled or almost straight, reptant to suberect, 220—450 long, 12—15 diam., with a very obtuse or obtuse or sub-obtuse tip; perithecia spheric, black, globose, with an indented or incise border, having 8 setae, 145—240 in diam.; asci not observed; ascospores dull-brown in color, elliptic to cylindrate, with rounded tips, 4-septate, well constricted at the septa, 46—54 long and 21—27 broad.

In the general aspect, this species is allied to *M. banarae* and *M. xylosmae*, but distinct from both.

38. ** **MELIOLA** (Irenina) **BONETII** Cif., n. sp.

Coloniis epiphyllis, rotundatis, confluentibus, nigris, 2—5 mm. diam.; mycelio laxo, pauce ramoso, non intricato, vel recto et divaricato-ramoso; hyphopodia capitata pauca, semper opposita, 18—37 separata, sphaerica, sine cellula basali, 3—5 usque 7—9 diam., cum septo basali cellulas inequilateralia separantia, hyphopodia mucronata pauca rudimentalia, conica vel cylindroidea, 4—8 longa; perithecia nigra, globoso-depressa, 80—160 diam.; setis nullis; ascis 2—4-sporis; sporis ellipsoideis vel cylindraceis, brunneo-fuscis, ad septa non constrictis, regularibus, 30—34 × 10—13.

HAB.: in pagina superiore, rarius inferiore *Dahlbergiae berterii* (P. DC.) Urb., (Leguminosae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, shore of Río Ozama, 15.XII.1929, leg. E. L. E. (*N° 3472*).

Formula: 3102.3220. The colonies are epiphyllous, more or less rounded or orbicular in shape, 2—5 mm. diam., frequently confluent, diffuse up to dense, black; mycelium diffused, composed of scarsely branched hyphae, septate, well evident, light yellow-brownish in color, branched at about 90°; capitate hyphopodia few in number, allways opposite, 18—37 apart, more or less regularly spheric, without basal cell, isolated from the mycelic hypha by a basal septum, very rarely sub-lobulate, max. diam. 7—9, min. diam. 3—5, frequently one greater and the opposite smaller; mucronate hyphopodia reduced in number, rudimentary, more or less mixed with the capitate hyphopodia with a conic or cylindroid cell, 4—8 in lenght, and a thickened base 5—7 diam., simple; perithecia black, globose-flattened, smooth or cellular, 80—160 diam., without myceliar or perithecial setae; asci 2—4-sporic; spores ellipsoid or cylindraceous, regular in shape, constricted at the septa. 4-septate, dull-brown in color, 30—34 by 10—13.

A very notable species, apparently the first glabrous Meliolinea (of the subgenus *Irenina*) with opposite, capitate hyphopodia without basal cell. The general structure of the species is primitive, chiefly for the rudimental

differentiation of capitate and mucronate hyphopodia, and the sessile hyphopodia. It is necessary to observate that our specimen in densely covered by symbiotic Hyphomycetes, and this fact may be not without influence on the morphology of the *Meliola*.

On *Dahlbergia* (= *Dalbergia*) has been indicated *M. bicornis* Wint., a clearly distinct species.

This species has been dedicated to the french mycologist BONET, first discovering and studying the hyphopodia of *Meliolae*.

39. * **MELIOLA** (Irenina) **BORINQUENA** Cif., n. nom.

Syn. *Irene portoricensis* Toro, Mycologia, Vol. XVII, pag. 141 (1915). *Irenina portoricensis* Stev., Ann. Mycol., Vol. XXV, pag. 453 (1927), non *Irenopsis portoricensis* Stev. (1927).

On *Acnistus arborescens* (L.) Schlecht. (Solanaceae), Cordillera Central, prov. Seybo, El Jovero, 26.VII.1930, coll. E. L. E. (*N° 4620*).

A nice species, previously found in Puerto Rico (only one record), on the same host plant, and clearly distinct from all others found on the same family of host plants. The colonies are surrounded by a yellowish, decolorized halo, the species being, indeed, feebly parasitic. The colonies are very small (0,5—1 mm. in diam., rarely to 1,5 mm.), almost dot-like, not confluent, from scattered to aggregated, so that are developing in largely confluent spots. The mycelium is densely crooked and the colonies regularly rounded, and the general aspect of the fungus is that of a young thyriothecium.

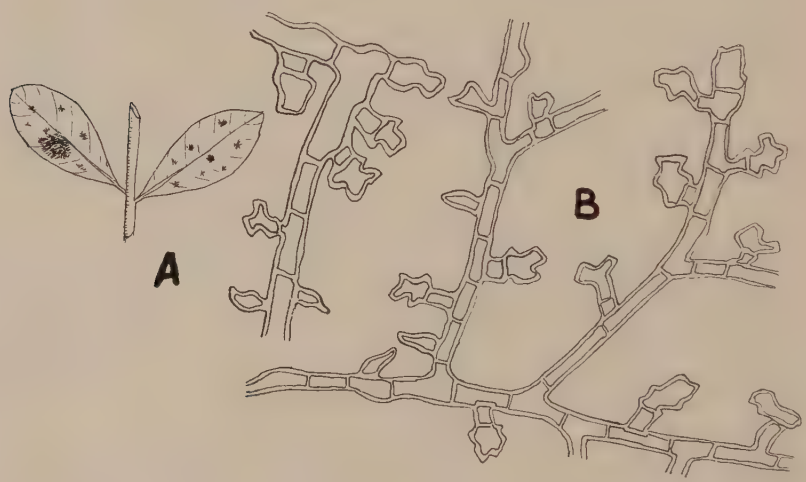

Fig. 12. *Meliola buxi* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

40. MELIOLA BURSERACEARUM Stev., Ann. Mycol., Vol. XXIV, pag. 199 (1928).

On *Tetragastris balsamifera* (Sw.) O. Ktze (Burseraceae).

New record: Cordillera Central, prov. Santo Dominga, Villa Altagracia, 12.II.1930 (*N° 3090*). This specimens is very similar for the morphological features, the setae being longer than in the type (up. 700), but also very rarely dentate at the tip. See CIFERRI (1933) for this uncommon species.

41. MELIOLA (Eumeliola) BUXI Cif., Ann. Mycol., Vol. XXXVI, pag. 206 (1938). (Fig. 12).

On *Buxus glomerata* (Griseb.) Müll.-Arg. (Buxaceae). Endemic and very rare: see CIFERRI (1938) for the only record.

42. MELIOLA BYRSONIMAE Stev., III. Biol. Mon., Vol. II, pag. 49 (1916).
On *Byrsonima crassifolia* (L.) E. B. K. (Malpighiaceae), quite frequent in Central America and West Indies found also on *B. spicata* (Cav.) L. C. Rich. and *Byrsonima* sp. (aff. *B. spicata*). Also on *Byrsonima* sp. (aff. *B. crassifolia*), Llano Costero, prov. Santo Domingo, Guerra, Cuenca, in savanna thickets, 13.VIII.1929, coll. E. L. E. & R. C. (*N° 2714*).
This species has been indicated for Santo Domingo also under the binomial *M. stuhlmaniana* P. Henn., but is to be referred to *M. byrsonimae*. This species is variable but only within narrow limits; e.g. the diameter of the perithecia may oscillate from 100 or less (on *Byrsonima* sp., *N° 2872*) to 300 or more (on *B. spicata*).
The most aberrant specimen is that on *Byrsonima* sp. (Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. E. L. E., (*N° 3290*), in which the setae are very scarce, so that the fungus is quite similar to an *Irenina*.
For previous quotations see CIFERRI (1927, 1928).

43. * MELIOLA BYRSONIMICOLA Stev. et Teh., Mycol., Vol. XVIII, pag. 10 (1926).
On *Byrsonima crassifolia* (L.) H. B. K. (Malpighiaceae), Llano Costero, prov. Santo Domingo, Manielito, 11.II.1930, coll. E. L. E. (*N° 3344*).
Perithecia 130—180 diam.; setae obtuse, 610—660 in lenght; spores 42—45 × 16—19.

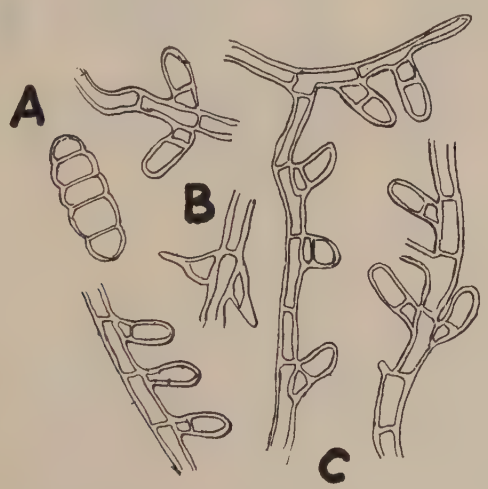

Fig. 13. *Meliola canellae* Cif. *a*) Ascospore; *b*) Mucronate hyphopodia; *c*) Capitate hyphopodia.

This species, up to-date known on the same genus of the host plant only in the type locality (British Guiana), is notable and completely different from *M. byrsonimae*, a species found on the same host plant in the Dominican Republic (see above).

44. * MELIOLA CALATHEICOLA Stev., Ann. Mycol., Vol XXVI, pag. 265 (1928).

On *Calathea allouia* (Aubl.) Lindl. cult. (Marantaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 300 ca., 3.III.1930, coll. R. C. (without number).

A doubtful determination, the Dominican material being sterile: this species has been determined on the base of shape of capitate hyphopodia and mycelic setae, though the latter are very scarce. This is the first record outside locality (Costa Rica).

45. MELIOLA CALOPHYLLI Stev., Ill. Biol. Mon., Vol. II, pag. 22 (1916).

On *Calophyllum antillanum* Britt. (under *C. calaba* Jacq., really *C. calaba* Auct. not Jacq.; = *C. jacquini* Fawc. et Rendle (Clusiaceae). See CIFERRI and FRAGOSO (1926) for this not uncommon species.

46. MELIOLA CANELLAE Cif., Ann. Mycol., Vol. XXXI, pag. 155 (1933). (Fig. 13).

On *Canella alba* Murr. (= *C. winterana* (L.) Gaertn.) (Canellaceae).

New record: Cordillera Septentrional, prov. Puerto Plata, Sosúa, Coastal forest, 20.III.1930, coll. E. L. E. (*N° ?3337*).

An infrequent species, found only in Puerto Rico and Santo Domingo; see CIFERRI (1928).

47. MELIOLA CAPILLIGERA Cif., Ann. Mycol., Vol. XXXI, pag. 154 (1933). (Fig. 14).

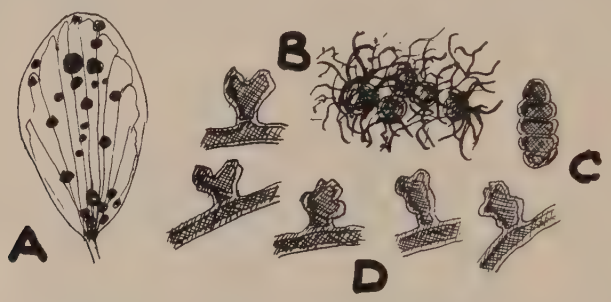

Fig. 14. *Meliola capilligera* Cif. *a*) Habitus of the fungus; *b*) Perithecia covered by setae; *c*) Ascospore; *d*) Hyphopodia.

Coloniis nigris, velutinis, epiphyllis, rotundatis, 1—2 mm. diam., saepe confluentibus, mycelio e hyphis brunneo-fuscis, septatis, irregulariter ramosis composito; hyphopodia capitata contigua vel singula, pro more opposita, 2—3-(irregulariter) lobata, subsphaerica, 16—20 diam., hyphopodia mucronata non visa; setis myceliaribus numerosissimis, rectis usque plus vel minus curvatis, rarius sub-hamatis, nigris, opacis, 160—350 × 10—14; perithecia sphaerica, nigra, 180—230 diam.; ascis diffluentibus; sporis brunneo-fuscis usque nigridulis, fumosis, cylindraceis vel ellipticis, 4-septatis, ad septa parum constrictis, 40—46 × 18—22.

HAB.: in foliis *Guajaci sancti* L. (Zygophyllaceae).

On the same host plant, new records are: Valle del Cibao, prov. Santiago Hato del Yaque, in thickets, 31.XII.1930, coll. R. C. (without number). Valle de San Juan, prov. Azua, San Juan de la Maguana, in forest, Km. 8 west of the town, 18.VIII.1929, coll. idem, (*N° 2839, 2849*).

M. woodiana Sacc., quoted for Santo Domingo on this host plant, must be referred to this species, the former being limited to the members of the Rubiaceae family. Found in Puerto Rico and Santo Domingo.

48. MELIOLA CAPSICOLA Stev., Lll. Biol. Mon., Vol. II, pag. 41 (1916).
On *Capsicum bacchatum* L. (Solanaceae). New records; Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica,16 .II.1930, coll. R. C. (*N° 3100*); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, Banks of Río Ozama, 15.XII.1929, Coll. E. L. E. (*N° 2782*).
This species is but slightly variable; the setae may be longer (up to 450) with acute or obtuse tips (not allways acute as in description), 265 in lenght.
This species has been quoted by CIFERRI and by CIFERRI and FRAGOSO (1927, 1931) on the cultivated *Capsicum annuum* L.

49. MELIOLA CAPUT-MEDUSAE Cif., Ann. Mycol., Vol. XXXI, pag. 148 (1933). (Fig. 15).
On *Jacaranda poitaei* Urb. (Leguminosae). Found only once.

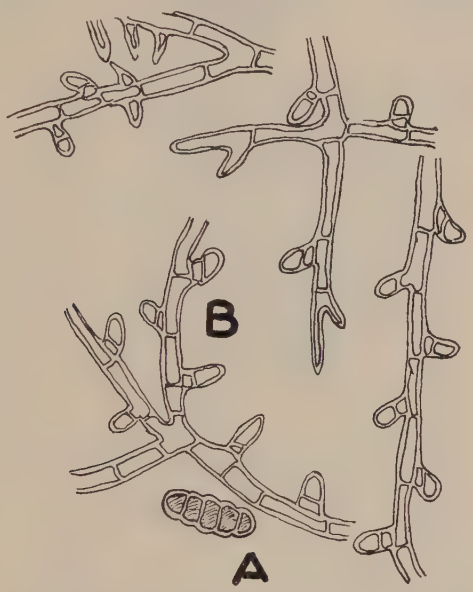

Fig. 15. *Meliola caput-medusae* Cif. *a*) Ascospore; *b*) Mycelium with hyphopodia.

50. MELIOLA CARBONACEA Cif., Ann. Mycol., Vol. XXXVI, pag. 207 (1938). (Fig. 16).
On *Sophora tomentosa* L. (Leguminosae). Endemic; only one record.

51. MELIOLA CASEARIAE Petr. et Cif., Ann. Mycol., Vol. XXVIII, pag. 386 (1930). (Fig. 17).
On *Casearia silvestris* Sw. (Flacourtiaceae). New records: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 16.II.1930, coll. R. C. (*N° 3219*).
This endemic species, has been collected a second time on the same host plant. The new specimen agree well with the type: only the spores are slightly shorter (44—48 instead of 46—55), the perithecia smaller (80—100 in diam. instead of 170—230), and the capitate hyphopodia also smaller (19—23 by 7,5—11). The setae are acuminate, rarely obtuse, 700—750 in leght, and the mucronate hyphopodia 18—26 by 6—8 at the base, 2—4 thick at the tip.

The formula of the second specimen would be: 3111.4313.

On *Casearia* spp. the following species or varieties are found, up to-now, in the Dominican Republic:

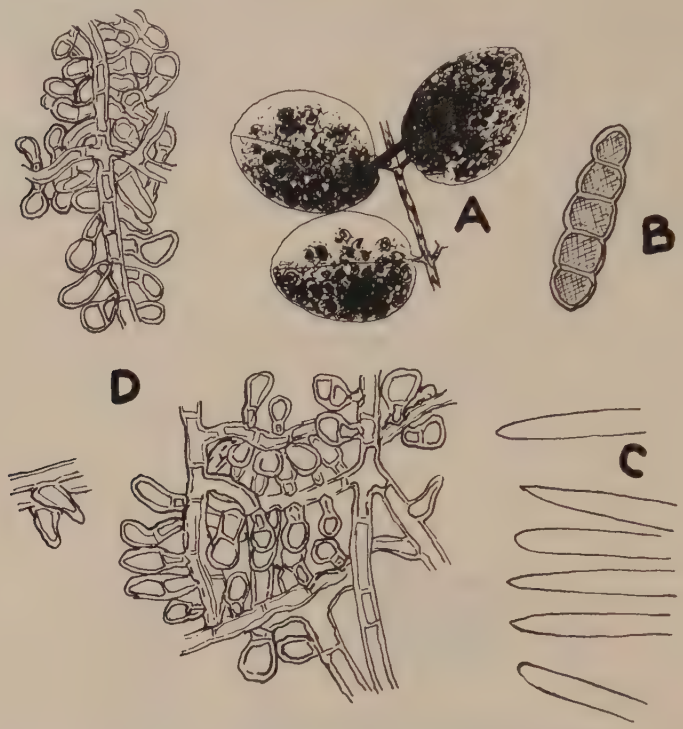

Fig. 16. *Meliola carbonacea* Cif. *a*) Habitus of the fungus; *b*) Ascospore; *c*) Tip of the hyphae; *d*) Mycelium with hyphopodia.

1) *M. casearia* Petr. et Cif., on *C. silvestris* formula: 3111.5333
2) *M. ambigua* Pat. et Gaill. var. *casearíaecola* Cif., on *C. guianensis* formula: 3111.3233
3) *M. banarae* Stev. var. *aculeata* Cif., on *C. aculeata* formula: 3111.4222
4) *M. melanochaeta* Cif., on *C. arborea* formula: 3411.3231
5) *M. trichocarpa* Cif., on *C. ilicifolia* formula: 3413.2222

M. caseariicola Hansf. (Proc. Linn. Soc. London, Vol. CLIX, pag. 24 1947) on *Casearia engleri* of the East Africa (formula $311\frac{1}{2}.4222$) is possibly allied, if not identic, with *M. ambigua* var. *caseariicola* but all the *Meliolae* on *Casearia* are to be revised.

52. ** **MELIOLA** (Irenina) **CASSIAE** Cif., n. sp.

Epiphylla, plagulas nigras, rotundatas aut irregulares, 1 mm. diam. subinde confluentes, atras efformantes, totam folii superficiem obtegentes; mycelium ex hyphis ramosissimis, irregulariter insertis, opaco-brunneis, septatis, 6—8 crassis, regulariter anguloso-tortuosis, vulgo zig-zag dispositis; hyphopodiis capitatis copiosis, alternatis vel unilateralibus, uno quoque mycelii segmento, cellula capitata globosa vel ovoidea, non vel angulosa, 13—14 × 10—11, cum cellula basilari 2—4 longa vel sine stipite; hyphopodiis mucronatis paucis, basi incrassatis, collum longum habentibus, curvulis vel non; sine setis myceliaribus vel perithecialibus; peritheciis nigris, scabris, sphaerico-depressis, opacis, margine irre-

gulariter inciso, 130—210 diam; ascis 4-sporis cylindricis aut sub-ellipticis, utrisque rotundatis, brunneis, 4-septatis, ad septa constrictis, 33—37 × 10—12.

HAB.: in pagina superiore foliorum *Cassiae pedicellaris* P. DC. (Leguminosae), Cordillera Septentrional, prov. Puerto Plata, Cuesta de Piedra, ca. 200 m.; 19.II.1930, leg. E. L. E. (*N° 3352*).

Formula of the species: 3101.3230. This species is allied to *Meliola*

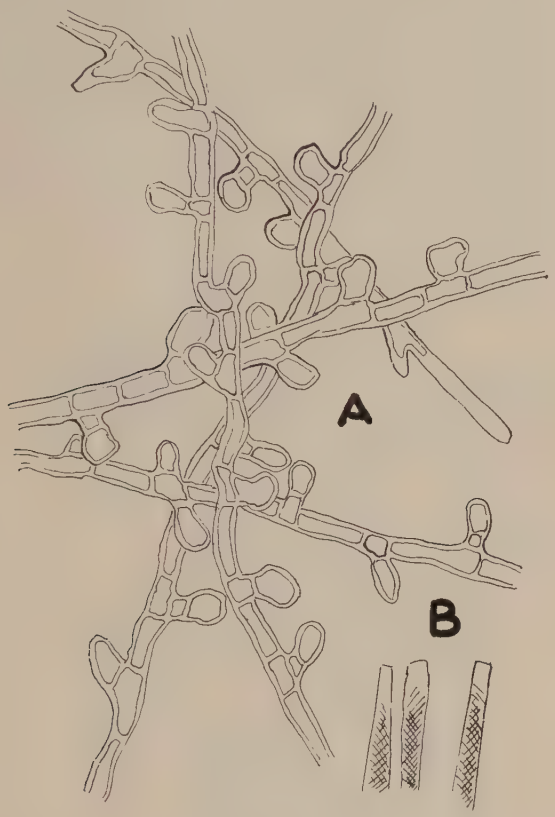

Fig. 17. *Meliola casearíae* Petr. et Cif. *a*) Mycelium with hyphopodia; *b*) Tip of the setae.

(Irenina) *meibomiae* Stev. et Teh., as well as to *M.* (I.) *ingaeicola* Speg., both found on the same family of host plants, but it is clearly distinct for a number of characteristics, chiefly for the radiate hypothecial (perithecial) disk. It is also distinct from MELIOLA (Irenina) CUBITELLA (Stev. et Teh.) Cif., n. comb. (*Irene cubitella* Stev. et Teh.), and from MELIOLA (Irenina) CUBITORUM (Stev. et Teh.) Cif., n. comb. (= *Irene cubitorum* Stev. et Teh.) for shape and disposition of the mycelic hyphae; from *M.* (I.) *lonchocarpi* Speg., *M.* (I.) *hymenaeicola* Cif. et Frag. and *M.* (I.) *gesuitica* Speg. for the shape and size of the capitate hyphopodia, and size of the perithecia. The capitate hyphopodia are also different from those of *M.* (I.) *pseudanastomos* Rehm.

53. MELIOLA CAYMANENSIS Ell. et Ev. in Millsp., Col. Mus. Pub. Bot., Ser. 1, Vol. II, pag. 15, (1900).

On *Rivea* (Stictocardia) *campanulata* L. (Convolvulaceae). Quoted

by CIFERRI (1938); in common with the Grand Cayman Islands. An unfrequent species.

54. ** **MELIOLA** (Irenopsis) **CHAETHACHNA** Cif., n. sp. (Fig. 18).
Coloniis amphigenis, praecipue epiphyllis, nigris, rotundatis, pro more confluentibus, singulis 1—2 mm. diam.; mycelio laxo, 7,5—8,5 crasso; hyphopodia capitata pauca, alternantia vel unilateralia, etiam sub-opposita, 17—21 longa, cellula capitata sphaeroidea, simplicia, 10—14 × 8—12, cellula basali bene evident; 6—8 u. longae hyphopodia mucronata pauca, alternantia, rarius opposita conica, sub-acuminata, recta vel rectiuscula, 18 longa; perithecia aggregata, 130—375 diam., nigra, sphaerica, opaca; setis myceliaribus non visis; setis perithecialibus paucis, stellatim dispositis, acutis vel acuminatis, brunneis, 85—150 longis, frequenter basem incrassatam habentibus; ascis pro more bisporis, diffluentibus; sporis variabilibus, brunneis, ellipsoideis usque cylindraceis, 4-septatis, 42—46 × 16—19.

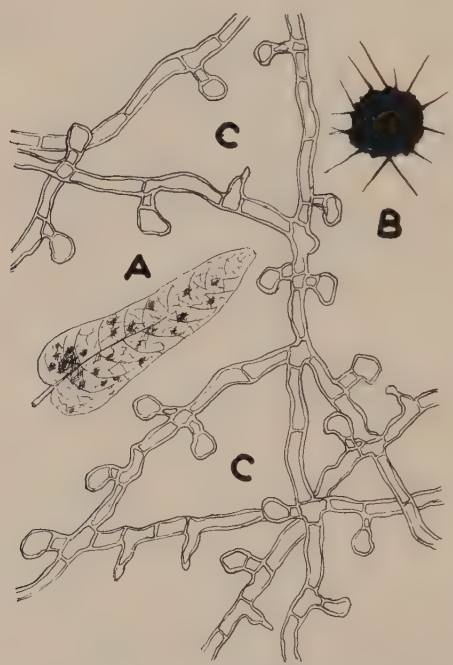

Fig. 18. *Meliola chaethachna* Cif. *a*) Habitus of the fungus; *b*) Perithecium with setae; *c*) Mycelium with hyphopodia.

HAB.: in foliis *Stigmatophylli lingulati* (Poir.) Small (Malpighiaceae), Cordillera Septentrional, prov. Santiago, Santiago de los Caballeros, Cuesta de Piendras, ca. 200 m.; 9.XII.1930, leg. E. L. E. (*N° 4194*).

Formula: 3401.4240. The colonies are amphigenous, as a rule well developed on the upper surface of the leaf, scantly or not developed at all on the lower, black, rounded or subcircular, effuse, with a dull centre and a lighter periphery, 1—2 mm. diam. when single, but usually confluent, covering also all the free surface of the leaf, with an irregularly, dense, arachnoid to powdery layer; mycelium loose, formed by light-bron tow

brown hyphae irregularly and sparingly branched, composed of slightly and irregularly curved segments, not frequently anastomized, 7,5—8,5 thick; capitate hyphopodia not abundant, one for each segment, alternate or unilateral, very rarely subopposite, never opposite, 30—70 apart, 17—21 long, head cell spheric or spheroid, rarely ovate to ellipsoid, simple, never angled or lobed, frequently subangulate, 10—14 long, 8—12 diam., stalk cell well evident, 6—8 long; mucronate hyphopodia few, alternate, rarely opposite and, if so, opposite to the capitate hyphopodia,conic, sub-acuminate, slightly inflated, straight or slightly curved, about 18 long, tip 4—5 diam., base 7—8 diam.; perithecia aggregated in spots near the central portion of the colonies, variable in size, 130—375 diam., black, spheric, with a conic protuberance, opac; mycelic setae none; perithecial setae not abundant, from 4—5 to 12—15 for each perithecium, as a rule star-like disposed, from acute to acuminate, brown to dull-brown, very rarely sub-obtuse, 85—150 long, not rarely irregularly thickened at the base, and here 7,5—9 thick, about 3—4 in diam. at the tip; asci generally 2-spored, very diffluent; spores not uniform in shape, 42—46 long, 16—19 thick, brown to dull-brown in color, cylindric or sub-cylindric to ellipsoid in shape, with rounded ends, 4-septate, very slightly narrowed to clearly narrowed at the septa.

On the same family are found *M. rectangularis* Stev. and *M. tortuosa* Winter, both of the same subgenus *Irenopsis*, but distinct from this species, and tipically found on members of other families of plants. This species is allied also to *M. martiniana* (Gaill.) Stev. on Lauraceae, but not identic.

55. MELIOLA CHIOCOCCAE Stev., Ill. Biol. Mon., Vol. II; pag. 76 (1916).

On *Chiococca parvifolia* Wullschläg. [= *C. alba* (L.) Hitch. var. *parvifolia* Wullsch.] Urb. (Rubiaceae) Llano Costero, prov. Santo Domingo, Ciudad Trujillo, La Caleta, road to Boca Chica, 10.II.1930, coll. R. C. & E. L. E. (*N° 3138; 3142*).

Practically identic to the type species, as found in Puerto Rico on the same host plant; see CIFERRI (1931).

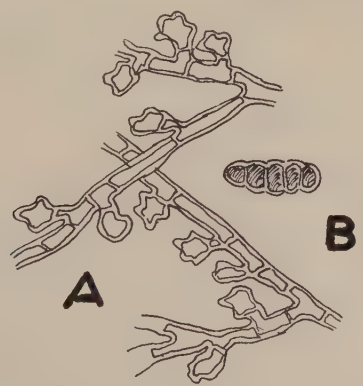

Fig. 19. *Meliola circinans* Earle. *a*) Mycelium with hypohopodia; *b*) Spore.

56. MELIOLA CIFERRIANA Petrak apud Petr. et Cif., Ann. Mycol., Vol. XXX, pag. 200 (1932).

On *Capparis flexuosa* L. (Capparidaceae).

Only one record; see PETRAK and CIFERRI (1932).

57. MELIOLA CIRCINANS Earle, Bull. New York Bot. Garden, Vol. III, pag. 304 (1905). (Fig. 19).

On *Cladium mariscus* (L.) R. Br. (Cyperaceae).

New records of this cosmopolitan, american species: Cordillera Septentrional, prov. Puerto Plata, Sosúa, Cabarete, Coll. R. C. (*N° 3224*). Valle del Cibao, prov. La Vega, La Vega, toward Rincón, 17.IV.1930, coll. E. L. E. (*N° 4215*), the last a poor specimen.

For the association with *M. argentina* Speg., see under the last species; see also CIFERRI (1933).

58. ** **MELIOLA** (Eumeliola) **CLADACANTHA** Cif., n. sp. (Fig. 20).

Coloniis amphigenis variabilibus, in pagina superiore 1,5—3 mm. diam., nigris, crustosis, in pagina inferiore nigridulis, effusis, 2—6 diam., mycelio laxo, opposito sed pauci ramoso, segmentis curvulis, brunneo-nigris, 7—9 crassis; hyphopodia capitata alternantia vel unilateralia, simplicia, elliptico-elongata, sursum plus vel minus acutata usque sub-obtusa, rarius

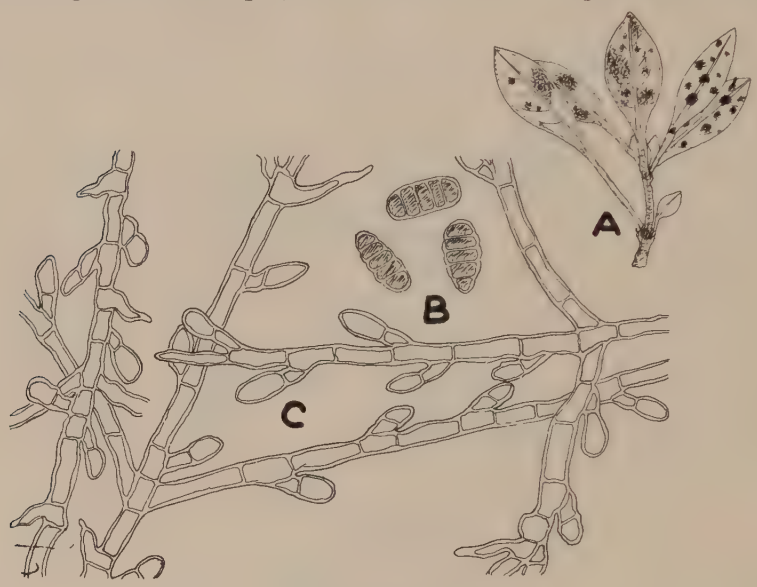

Fig. 20. *Meliola cladacantha* Cif. *a*) Habitus of the fungus; *b*) Ascospores; *c*) Mycelium with hyphopodia.

angulosa, 20—28 longa, cellula apicali 14+18 × 10—13, cellula basali pro more evidenti, 7—11 longa; hyphopodia mucronata opposita, rarius alternata, hyphopodia capitata intermixta, conoidea vel ampulliformia, 13—16 longa; setis myceliaribus delicatis, nigris, erectis, rigidulis, 200—300 × 6—8, apice acutato; setis perithecialibus non visis; perithecia nigra, opaca, marginaliter lobato-anfracta, mamillata, aggregata, 75—150 diam; ascis non visis; sporis ovoideo-apiculatis usque ellipticis aut cylindraceis, variabilibus, brunneo-nigris, 4-septatis, 32—35 × 14—16.

HAB.: in foliis *Stenandri scabrosi* (Sw.) Nees (Acanthaceae), Cordillera Central, prov. Samaná, Los Haitises, near La Llanada, solo calcareo, 27.VI.1930 leg. E. L. E. (*N° 4196*).

Formula: 3111.3221. Colonies amphigenous, on the upper side of the leaf small, more or less rounded, single, scattered or aggregated, not or rarely confluent, black, crustose, sub-radiate, 1,5—3 mm. diam.; on the

lower side greater, blackish, effuse, superficial, aggregated or confluent, 2—6 mm. diam.; mycelium loose, composed of oppositely, not densely branched hyphae, not anastomosing, brown to dull-brown, septate, with the segments straight or slightly curved, 7—9 in thickness; capitate hyphopodia alternate to uniteral, as a rule simple, elliptic-elongate or elongate-ovoidal, more or less acute to sub-obtuse at the tip, rarely angled, very rarely lobate, 20—28 in lenght at all, head cell 14—18 by 10—13, rarely to 20 long, stalk cell as a rule present and evident, 7—11 long; mucronate hyphopodia relatively frequent, opposite, rarely alternating, associate to the capitate hyphopodia, from simple and conoid to bottle-shaped, with the base more or less regularly thickened, tip thin, truncate, 13—16 long at all, base 8—10 (rarely more) thick, tip only 2,5—4; mycelic setae quite abundant, thin, black, sub-rigid, 6—8 thick, straight, never curved or, rarely, only at the base, not thickened in the lower part, acute to acuminate at the free end, 200—300 long; perithecial setae absent; perithecia black, opac, with the border irregularly lobate-anfract, with small, black, truncate protuberances, not abundant, as a rule aggregated, 75—150 diam.; asci not observed; spores from ovoidal-apiculate to elliptic up to perfectly cylindric, with rounded ends, very variable in shape but not irregular, brown-blackish in color, 4-septate, slightly to evidently narrowed at the septa, 32—35 long by 14—16.

On Acanthaceae were found *M. psychotriae* (tipically described on Rubiaceae), having the same formula, this species being evidently allied to our new species. *M.* (Irenina) *irregularis* Stev., found on *Hygrophila* (Acanthaceae) in Puerto Rico is a different species, having in common the variability in shape of the spores.

The setae are particularly abundant but, in certain spots, found only around and at the base of the perithecium, or around the first sketch of the same organ, and radiating around; the same setae are found on the radiate, mycelic knots; in any case, perithecial setae, in adult and mature specimens, are absent. It appears that this species may be considered as transitional from *Eumeliola* to *Irenopsis*, another demonstration of the incongruity of a too rigid, generic splitting of the unity of the genus *Meliola*.

59. MELIOLA CLAVULATA Winth., Hedwigia, Vol. XXV, pag. 98 (1886).

Previously found in the Dominican Republic on *Ipomoea acuminata* (Wall.) R. et Sch. (= *I. cathartica* Poir.), *I. phyllomega* (Vell.) House, *I. tiliacea* (Willd.) Choisy and *Ipomoea* sp. (Convolvulaceae).

This cosmopolitan, intertropical species is one of the commonest of the West Indies. Amongst the new records, are notable: on *I. macrorrhiza* (L.) R. et Sch. (= *I. furcyensis* Urb.) Valle de San Juan, prov. Azua, San Juan de la Maguana, VIII. 1929, coll. R. C. (without number). On *I. phyllomega* (Vell.) House, Cordillera Central, prov. Santo Domingo, Villa Altagracia, 11.II.1930, coll. R. C. (*N° 3125*); as above, Villa Altagracia, near Río Isabel, 12.II.1930, coll. E. L. E. (*N° 3033*). On *I. rubra* (Vahl.) Millsp., Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 5.XI.1928, coll. R. C. (without number); on the same, Valle de San Juan, prov. Azua, San Juan de la Maguana, VIII. 1929, coll. R. C. (*N° 2861*); on the same, Llano Costero, prov. Santo Domingo, Guerra, Sabana de Guabatico, VIII. 1929, coll. R. C. (*N° 2716*). On *I. tiliacea* (Willd.) Choisy, Llano Costero, prov. Santo Domingo, Ciudad Trujillo, in ruderatis, 14.XII.1929, coll. R. C. (*N° 2737*). On *I. nil* (L.) Roth., Llano Costero, prov. Santo Domingo, road from Jaina to San Cristóbal, VI. 1926, coll.

R. C. (without number). On *Rivea corymbosa* (L.) Hell. f., Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2798*).

The specimen quoted by Toro on *I. batatas* is to be referred to the variety of the same name. On *Rivea corymbosa* the setae are longer than in the other specimens (200 or little more), and like the setae of the variety *batatae* of the same species. The setae of the specimens *N° 2716, 2831, 3033*, and *3125* are completely typical; less so the setae of the specimen *N° 2798*, that are obtuse but not or slightly clavulate. The capitate hyphopodia are typical in most specimens (e.g. *N° 2831, 3033*; *3125* and so on); typical but slightly smaller on the specimens *N° 2716* and *2798*.

In the specimen *N° 2861 M. clavulata* is associated with *M. malacotricha* Speg., having smaller, opposite, capitate hyphopodia (see).

For previous quotations, see also Petrak and Ciferri (1933).

60. * MELIOLA CLAVULATA Wint. var. BATATAE Stev., Ann. Mycol., Vol. XXIV, pag. 241 (1928).

On *Ipomea batatas* L. (Convolvulaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, in fields, 7.I.1930, coll. E. L. E. (*N° ?3016* or *?2910*). Found in British Guiana, Costa Rica, Ecuador and Panama. A quite rare variety, previously found in Santo Domingo (under the type species). The differences between the type species and the variety are hardly recognized, as the setae are quite variable; see above.

61. * MELIOLA CLERODENDRICOLA P. Henn., Hedwigia, Vol. XXXVII, pag. 288 (1898).

On *Clerodendron spinosus* (L,) Spreng. (Verbenaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2746*).

Apparently this is the first record of this species for tropical America, being quoted for the Central Africa and Philippine Islands. The Dominican specimen agree well with the description.

62. MELIOLA CLIDEMIAE (Stev.) Cif., Ann. Mycol., Vol. XXXVI, pag. 208 (1938).

On *Clidemia hirta* (L.) D. Don (Melastomataceae), previously quoted by Ciferri (1938).

On the same host plant, new records are: Cordillera Central, prov. Azua, San Juan de la Maguana, Arroyo Manacle, 750 m., VIII. 1929, coll. R. C. (*N° 2890*); Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, Coll. R. C. (*N° 3105*).

The specimens above quoted agree well with the description.

63. MELIOLA COCCOLOBIS Stev. et Teh., Mycol., Vol. XVIII, pag. 5 (1925).

On *Coccoloba nodosa* Lindau (Polygonaceae).

A neotropical species previously quoted by Ciferri (1938). The spores are up to 40—45 in lenght instead of 33—38. This is a species very well distinct from the much more frequent *M. angusta* Stev., found on the same genus of host plants.

64. * **MELIOLA** (Irenina) **COLUBRINAE** (Stev.) Cif., n. comb.

Syn. *Irenina colubrinae* Stev., Ann. Mycol., Vol. XXV, pag. 451 (1927).

On *Colubrina ferruginosa* Brongn. (Rhamnaceae), Cordillera Central, prov. Seybo, El Jovero, Punta Icacos, 26.VII.1930, coll. E. L. E. (*N°4209*).

Our specimen agree well with the description of this species, with

excection of the perithecia that are scarce, and the hyphopodia nearer and quite abundant. This species is known only for Panama on *Colubrina rufa*.

65. * **MELIOLA** (Irenina) **COMBRETI** (Stev.) Cif., n. comb.
Syn. *Irenina combreti* Stev., Ann. Mycol., Vol. XXV, pag. 465 (1927).
On *Combretum laxum* Jacq. (= *C. jacquini* Griseb.) (Combretaceae), without locality and date, coll. E. L. E. (*N° 3332*).
A sterile specimen, determined upon the features of the mycelium and the hyphopodia; hence the determination is doubtfull.

66. MELIOLA COMOCLADIAE Stev., Ill. Biol. Mon., Vol. II, pag. 25 (1916).
Quoted by Ciferri and Fragoso (1928), and also as *Irenopsis* (1925) on *Comocladia dentata* Jacq. (Anacardiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1928, coll. E. L. E. (*N° 2815*); on *C. dodonaea* (L.) Urb., Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2868*); on *C. domingensis* Britt., Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929 (*N° 2824*); ?on *Spondias purpurea* L., Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 17.II.1930, coll. E. L. E. (*N° 3262*).

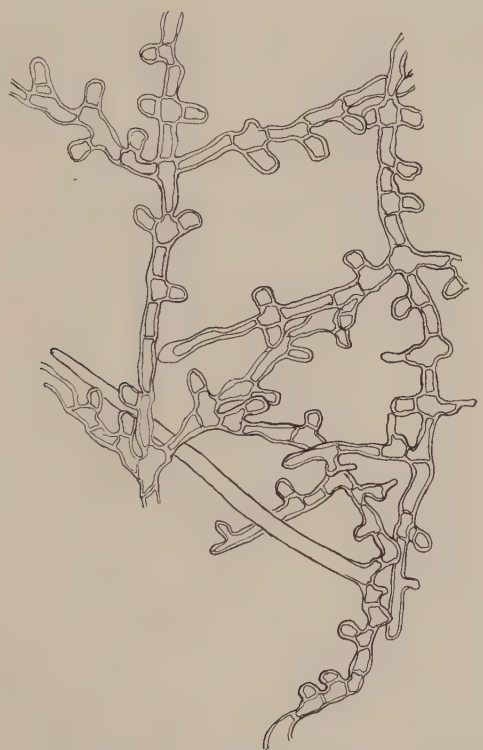

Fig. 21. *Meliola consocia* Cif. Mycelium with hyphopodia and one seta.

The specimen on *Comocladia dentata* have straight, not uncinate setae, the formula being 3401.4220 instead of 3301.4220. The determination of the *Meliola* on *Spondias* is doubtful, because the fungus is sterile and other fungi are present. This species is found in Santo Domingo and Puerto Rico.

67. MELIOLA (Irene) COMPOSITARUM Earle, Bull. New York Bot. Gard., Vol. III, pag. 306 (1905).

On *Eupatorium odoratum* L. (= *Osmia odorata* (L.) Sch. Bip.) and *Mikania* sp. (Compositae), quoted by Toro [under *Appendiculella compositarum* (Earle) Toro]. Now considered *Meliola* (Irene) *sororcula* Speg. (see).

68. MELIOLA CONFERTA Tehon, Bot. Gaz., Vol. LXXVII, pag. 502 (1919) (non Doidge, 1917). Syn. *Irenopsis conferta* Stevens, Ann. Mycol., Vol. XXV, pag. 234 (1917).

On *Rhacoma crossopetalum* L. (Celastraceae). Only one record: see Ciferri (1933).

69. ** **MELIOLA** (Eumeliola) **CONSOCIA** Cif., n. sp. (Fig. 21).

Coloniis nigris, epiphyllis, crustaceis sed delicatis, usque 2,5 mm. diam.; mycelio laxo, brunneo, ex hyphis opposite ramosis, non anastomosis ef formato, 8—11 crasso; hyphopodiis capitatis pro more alternatis vel unilateralibus, 18—22 longis, cellula apicali ovoidea usque cylindracea, 12—17 × 10—15, cellula basali evidente, 3—7 longa; hyphopodiis mucronatis paucis, isolatis, hyphopodiis capitatis intermixtis, conoideo-inflatis, 18—23 longis; setis myceliaribus brunneo-nigris, erectis vel suberectis, rectis vel curvatis, acutis vel subacutis, 145—225 longis; peritheciis paucis, isolatis, sphaericis, nigris, levibus, 75—140 diam.; ascis non visis; ascosporis brunneis, ellipticis vel cylindraceis, 4—septatis, 26—32 × 11—17.

HAB.: in foliis *Hernandiae sonorae* L. (Hernandiaceae), Cordillera Central, prov. Seybo, El Jovero, prope Sabana del Hato, 22.VII.1930, leg. E. L. E. (*N° H. 15738*).

Formula: 3111.3221. Colonies black, isolated or sub-confluent, crustaceous but thin, firmly adherent, dot-like up to irregular in shape, 0,5 to 2,5 mm. in diam., as a rule 1—2 mm. diam.; mycelium loose, yellowish-brown to dull-brown, composed of hyphae as a rule oppositely branched, branches inserted at an acute angle, also unilateral or irregular, not anastomized, densely septate, formed by mycelic straight or curved segments, not rarely at "zig-zag", 8—11 thick; capitate hyphopodia as a rule alternate or unilateral, more rarely opposite, quite abundant, 25—43 distant, 18—22 in lenght, formed by the head cell ovoid, ellipsoid or cylindroid, 12—17 by 10—15, never angled, acute or lobate, basal cell as a rule evident, 3—7 in lenght; mucronate hyphopodia very few in number, single, scattered, found together with the capitate hyphopodia, rudimentary, sub-conoid, lighter in color than the capitate hyphopodia, not more than one or two in number for each segment, with an inflated base, also cylindroid, more or less straight, cylindric-elongate at the tip, thin, 18—23 long, 9—11 thick at the base, 3—5 thick at the tip; tip truncate or rounded, rarely sub-acutate; mycelic setae not abundant, brown-blackish, erect or sub-erect, straight or curved, acute or sub-acute at the tip, 145—225 in lenght, not inflated at the base, but gradually and slightly thickened, 10—13 thick at the base, 4—5 thick at the tip; asci not seen; ascospores light-brown to dull-brown, elliptic and or cylindroid, with rounded to sub-acute ends, 4-septate, slightly narrowed at the septa, 26—32 by 11—17.

This is the first *Eumeliola* found on members of the Hernandiaceae family, frequently associated with *M.* (Irenina) *hernandiacearum* Cif. (see); *M. consocia* is found only on the lower surface the leaf, while *M. hernandiacearum* is found only on the upper.

70. MELIOLA CORONATA Speg., Ann. Soc. Argent., Vol. XVI, n. 175 (1883).

On *Anacardium occidentale* L. (Anacardiaceae), as quoted by Ciferri and Fragoso (1928). A frequent, cosmopolitan species; see *M. anacardii*.

71. MELIOLA (Irenopsis) CORONATA Speg. var. **TRIUMFETTAE** (Stev.) Cif., n. comb.

Syn. *Meliola triumfettae* Stev., Ill. Biol. Mon., Vol. II, pag. 30 (1916). *Irenopsis coronata* (Speg.) Stev. var. *triumfettae* Stev., Ann. Mycol., Vol. XXV, pag. 435 (1927).

On *Triumfetta semitriloba* Jacq. (Tiliaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2091*). On *T. lappula* L. (id.) as above, (*N° 2900*).

Fig. 22. *Meliola cucurbitacearum* Stev. Tip of the setae.

On the former host plant, this fungus was published by Toro under the binomial *Meliola triumfettae* Stev., the fungus on the latter host plant having shorter spores than according the description, the formula being 3401.3220.

72. MELIOLA CRENATO-FURCATA H. et P. Syd., Ann. Mycol., Vol. XIV, p. 77 (1916).

Previously recorded on *Stigmatophyllum lingulatum* (Poir.) Small and *Stigmatophyllum* sp. (Malpighiaceae) by Ciferri and Fragoso (1926, under *Meliola* sp.) and Toro (1927).

Neotropical. New record: on *Malpighia biflora* Poir. (Malpighiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, in forest, m. 250 ca., 12.XII.1929, Coll. E. L. E. (*N° 2748*).

73. MELIOLA CRESCENTIAE Stev., Ann. Mycol., Vol. XXVI, pag. 240 (1928).

On *Crescentia cujete* L. (cult.) (Bignoniaceae). New record: Cordillera

Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. E. L. E. & R. C. (*N° 3265*). For the previous record, see CIFERRI (1938). A quite common, intertropical species.

74. MELIOLA CUCURBITACEARUM Stev., Ill. Biol. Mon., Vol. II, pag. 58 (1916). (Fig. 22).

On *Cayaponia americana* (Lam.) Cogn. (Cucurbitaceae). In common with Puerto Rico; found by CIFERRI (1938) only once.

75. MELIOLA CUSPIDATA Cif., Ann. Mycol., Vol. XXIX, pag. 286 (1931).

Quoted by CIFERRI (1931) on *Bunchosia glandulosa* (Cav.) L. C. Rich. (Malpighiaceae). New records on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Arroyo El Caimito, 16.II.1930, coll. R. C. & E. L. E. (without number); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. id. (*N° 2804*); as above, La Caleta, m. Or 20, 10.II.1930, coll. E. L. E. & R. C. (*N° 3294*).

An endemic but not rare species; the determination of the specimen *N° 2804* is doubtful, on account of the poor fructification.

76. * MELIOLA (Irenina) CYCLOPODA Stev., Ill. Biol. Mon., Vol. II, pag. 16 (1916). (Fig. 23).

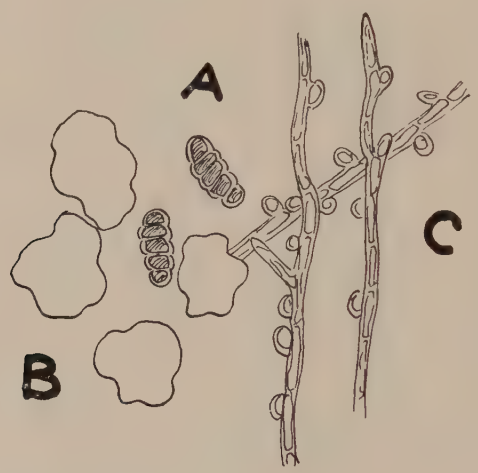

Fig. 23. *Meliola cyclopoda* Stev. *a*) Spores; *b*) projection of the perithecia; *c*) mycelium with hyphopodia.

On *Distreptus spicatus* (Juss.) Cass. (= *Pseudoelephantopus spicatus* (Juss.) Rohr) (Compositae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 17.II.1930, coll. E. L. E. (*N° 3043*). On *Mikania scandens* (L.) Wild. (id.), Cordillera Septentrional, prov. Santiago, Loma Diego de Ocampo, m. 700, VII. 1929, coll. R. C. (without number). On *Salmea scandens* (L.) P. DC. (id.), Cordillera Septentrional, prov. Puerto Plata, Sosúa, at Yagua-Mocha, 3.IV.1930, coll. E. L. E. (*N° 334*c). On *Wedelia gracilis* L. C. Rich. (id.), without locality, coll. id. (*N° 3108*).

This neotropical species has been described in Puerto Rico on *Distreptus spicatus*, apparently being rather common on this host plant.

The fungus on *Distreptus* agree well with with the description. The

specimen on *Mikania* is characterized by the capitate hyphopodia a little more irregular in shape, and elliptic more than spheric. The specimen on *Salmea* is densely overgrown by fungi, so that the habitus is slightly modified, and the fructification rather poor. The specimen on *Wedelia* is characterized by epiphyllous, blackish spots, with an irregular mycelium; the capitate hyphopodia are without basal cells, exceedingly simple and smaller (7,5—9 diam.); the mucronate hyphopodia are absent, so that the species on this specimen appears rudimentally developped. It is possible that this specimen may be classified, in the future, as a variety of *M. cyclopoda* if not in another species.

77. ** MELIOLA CYCLOPODA Stev. var. **NEUROLAENAE** Cit., n. var.
A typo recedit hyphopodiis capitatis plane apodis; peritheciis 80—100 diam.; sporis 40—45 × 18—21.
HAB.: In foliis *Neurolaenae lobatae* (L.) R. Br. (Compositae), Cordillera Septentrional, prov. Puerto Plata, Las Majaguas, 700 m. ca. 14.II.1930, leg. E. L. E. (*N° 3020*).

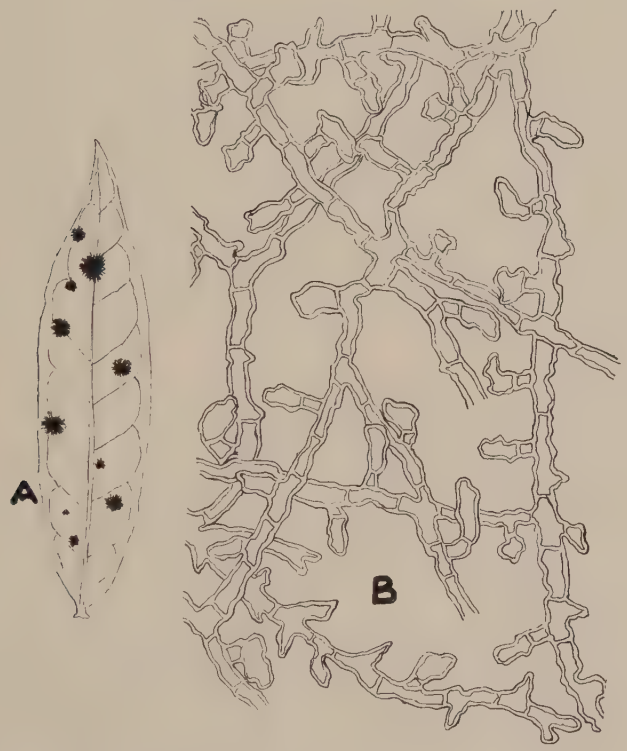

Fig. 24. *Meliola cyphopoda* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

Formula: 3101.4320. This fungus has been referred to *M. cyclopoda* only with the greatest esitation. The most outstanding differential characteristic is observed on the hyphopodia, directly inserted on the hyphae, lacking of the basal cell; mucronate hyphopodia are exceedingly rare. Other differences are found in the confluent colonies, the greater size of the perithecia and spores, and so on.

78. ** MELIOLA CYDISTAE Stev., Ann. Mycol., Vol. XXVI, pag. 193 (1928) var. **AEQUINOCTIALIS** Cif. n. var.

A typo differt setis myceliaribus longioribus (580—740), aliis crenulatis dentatisve, non furcatis nec ramosis, simplicibus, obtusis; setis perithecialibus minoribus (150—180 diam.), pro more obtusis.

HAB.: in foliis *Cydistae aequinoctialis* (L.) Myers (Bignoniaceae), Cordillera Septentrional, prov. Puerto Plata, Sosúa, Sabaneta, Caño Hondo, 29.III.1930, leg. E. L. E. (*N° 3326*).

Formula of the variety: $34\frac{1}{3}$ 1.3223; formula of the type species: 3131.3221. This variety is clearly distinct from the type species, found on *Cydista* in Panama, having mycelic setae peculiarly branched, 260—280 long, but lacking of perithecial setae. The other characteristics are identic from the typical species to the variety. A comparison with STEVENS' authentic specimen is necessary to clarify the systematic position of our fungus.

79. ** **MELIOLA** (Irenina) **CYPHOPODA** Cif., n. sp. (Fig. 24).

Coloniis fuscis usque nigris, paucis, isolatis, arachnoideis delicatisque, epiphyllis, 2—5 mm. diam.; mycelio ex hyphis brunneis vel fuscis, irregulariter ramosis, anastomosatis, variabilibus, 11—14 crassis composito; hyphopodiis capitatis modice copiosis, oppositis vel unilateralibus, cylindraceis vel ellipsoideis, brunneis, 29—43 longis, cellula capitata irregulariter elongata, usque inciso-dentata, recta vel inversa, 20—28 × 8—14, cellula basilari bene evidente, 7—14 longa, hyphopodiis mucronatis paucis, oppositis vel unilateralibus, solitariis vel hyphopodiis capitatis consociis, irregulariter conoideis, 18—22 longis; sine setis myceliaribus perithecialibusque; peritheciis paucis, sphaericis, 87—160 diam., a basi radiata oriundis; ascis oblongo-ellipticis ovatisve, facile diffluentibus, plerumque bisporis; sporis oblongis, ellipsoideis aut ovoideis, brunneis, 4-septatis, apicibus late rotundatis, 32—36 × 14,5—16,5; paraphysoidis fibroso-mucosis, indistinctis.

HAB.: In foliis *Marcgraviae rectiflorae* Tr. et Pl., (Marcgraviaceae), Península de Samaná, prov. Samaná, Samaná, Sánchez, prope Gran Estero, 15.VIII.1930, leg. E. L. E. (sine numero).

Formula: 3101.3220. Colonies dull-brown up to black, few in number, scattered, rounded, not or a little confluent, radiate-arachnoid, smooth, 2,5 mm. diam., found only on the upper side of the leaf; mycelium composed by hyphae brown to dull-brown in color, irregularly but also densely branched, anastomized, septate, with straight or curved segments, branches rarely opposite, angulate-crooked, irregularly thickened, 11—14 diam.; hyphopodia capitata quite abundant, opposite or unilateral, cylindric or ellipsoidal, quite long, straight or curved, brown, 29—43 in lenght, with the head cell irregularly elongated, variable, almost angulated to almost inciso-dentate, straight or inverted, not frequently sub-spheroidal and simple, as a rule 20—28 by 8—14, basal cell evident, 7—14 in lenght; hyphopodia mucronata few in number, opposite or unilateral, scattered but also mixed with the capitate hyphopodia, irregularly conoid in shape, simple, 18—22 long, thickened at the base, 10—12,5 in thickness, with a sub-obtuse tip, straight or curved, 6,5—8,5 in thickness, without myceliar or perithecial setae; perithecia few in number and rarely fertiles, black, spheric, scattered, 87—160 in diam., with radiate basal lamina; asci oblongo-elliptic or ovoid, diffluent, as a rule with two ascospores; spores oblong-ellipsoid or ovoid, dull-brown or light-brown, 4-septate, slightly narrowed at the septa, straight, with the tips slightly rounded,

32—36 in lenght, 14,5—16,5 in diam.; paraphysoid fibroso-mucose, indistinct.

This glabrous *Meliola* is in many ways different from *M.* (Irenina) *marcgraviae* Teh., a neotropical species found on the same genus of host plant. Is to be observed that our specimen is densely overgrown by symbiotic fungi, so that the description must be revised on unparasitized specimens.

80. MELIOLADEN DROPEMONIS Petr. et Cif., Ann. Mycol., Vol. XXVIII, pag. 387 (1930).

On *Dendropemon parvifolius* Urb. (Loranthaceae), an endemic species quoted by Petrak and Ciferri (1930); only one record.

81. MELIOLA DESMODII Karst. et Roum., Rev. Mycol., Vol. XII, pag. 77 (1890).

On *Desmodium axillare* (Sw.) DC. (= *Meibomia axillaris* O. Ktze), *D. supinum* (Sw.) DC. [= *Meibomia cana* (Gmel.) Blake] and *Centrosema virginianum* (L.) Benth. (= *Bradburya virginiana* Ktze.) (Leguminosae), as quoted by Toro (1927).

New record: on *Desmodium axillare* (Sw.) DC. (id.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 15.III.1930; leg. E. L. E. (*N° 3275*).

The specimens of this intertropical species are quite variable: e. g. the setae are from acute to obtuse, from abundant to scarce but allways simple, 430 or less in lenght, and also with smaller spores, the formula being variable up to 3113.3212.

82. ** MELIOLA DESMODII Karst. & Roun., var. **HETEROCHAETA** Cif., n. var.

A typo differt setis myceliaribus pro more obtusis et simplicibus (non dentatis), rarius acuminatis et plus minusve denticulatis, rarissime dentato-incisis, sporis 30—35 × 10—12.

HAB.: in foliis *Desmodii supini* (Sw.) DC. (= *D. cani* (Gmell.) Sch. et Tell.) (Leguminosae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, leg. E. L. E. (*N° 2800*).

The formula of the variety is: $31\frac{1}{3}$ 3.3223, the formula of the type species being: 3113.4121. In the writer's opinion, the *Meliola* on *Desmodium supinum* offers a transitional stage from the typic *M. desmodi* to a species with dentate setae.

83. MELIOLA DIDYMOPANACIS P. Henn., Hedwigia, Vol. XXXIV, pag. 106 (1895).

Previously quoted by Ciferri (1939) on *Didymopanax morototoni* (Aubl.) Dehne et Pl. (Araliaceae). It has been collected also on *Gilibertia arborea* (L.) E. March. (id.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, m. 150 ca., 16.II.1930, coll. E. L. E. (*N° 3096*). Neotropical.

On the last genus (also quoted under the generic name *Dendropanax*) the setae are longer than in the description, reaching 1200; all other characteristic are the same.

84. MELIOLA DIEFFENBACHIAE Stev., Ill. Biol. Mon., Vol. II, pag. 62 (1916).

On *Dieffenbachia seguine* (Jacq.) Schott. (Araceae), as quoted by Toro (1927). New record on the same host plant: Cordillera Central prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. R. C. (*N° 2907*).

The quotation made by CIFERRI and FRAGOSO (1927) under the binomial *Irenina aracearum* Stev. [**MELIOLA ARACEARUM** (Stev.) Cif., n. comb.] is to be referred to this species; see also CIFERRI (1931).

85. MELIOLA DIPHOLIDIS Stev., Lll. Biol. Mon., Vol. II, pag. 44 (1916).
On *Dipholis angustifolia* Urb. (Sapotaceae.) New record: on *D. salicifolia* (L.) A. DC. (Id.), Cordillera Septentrional, prov. Puerto Plata, without locality, 1930 coll. E. L. E. (*N° 3315*).
The spores of this Puerto Rican species are slightly variable according the host plant; see also CIFERRI (1928).

86. MELIOLA DISTICTIDIS Hansf., Proc. Linn. Soc. London, Vol. CLX, pag. 132 (1949).
This species has been quoted by CIFERRI under the binomial *M. bidentata* Cooke, while specimens on the same host plant were referred to *M. furcata* Lév. In the writer's opinion from the typical *M. bidentata* and *M. furcata* a number of transitions are possible: starting from dentate setae (not infrequently associated with the simple ones), with very small teeth at the end, is evoluted to very regularly, dichotomously branched setae, also with repeated dichotomy. Retaining only *M. bidentata* as species found on Bignoniaceae, the species erected by HANSFORD may be considered no more than a variety. On *Distictis lactiflora* (Vahl) D.C. (Bignoniaceae).

87. **MELIOLA DOMINGENSIS** Cif., n. nom.
Syn.: *Irene lucumae* Cif. et Frag., Bol. R. Soc. Esp. Hist. Nat., Vol. XXVII, pag. 324 (1927), non *Meliola lucumae* Stev. (1916).
Irenina lucumae Cif., Bol. Est. Agr. Moca, Ser. B, N° 14, pag. 75 (1929).
On *Calocarpum mammosum* (L.) Pierre [= *Lucuma mammosa* (L.) Gaertn.] (Sapotaceae).
This apparently rare, endemic species has been described as *Irene*, then referred to *Irenina*, and not laterly collected. It appears to be clearly different from *Meliola lucumae* Stev., described on the same host plant in Puerto Rico.

88. MELIOLA DURANTAE Gaill., Bull. Soc. Myc. Frans., Vol. VIII, pag. 181 (1892).
On *Lantana involucrata* L. (Verbenaceae), Cordillera Central, prov. Sejbo, El Jovero, Punta Icacos, 26.VII.1930, coll. E. L. E. (*N° 4526*).
It agree well with the description, but the spores are smaller (31—34 by 14—16), and the acuminate setae longer (up to 500); the perithecia are 100—120 in diam.; mucronate hyphopodia 16—19 in lenght, 9—10 in diam. at the base, and 3—4 at the tip. The setae are not torulose, but, as evident in the figure of GAILLARD, simple and smooth. The formula, according this specimen, is: 3111.3222.
The same species on *Lantana trifolia* L. has been quoted by TORO under *M. ambigua* Pat. et Gaill.; a new record is: Monción, V. 1929, coll. R. C. (*N° 2275*). In the specimen the colonies are small, black, almost dot-like, irregularly scattered, not confluent, 1 mm. or less in diam.

89. MELIOLA DURANTAE Gaill. var. LIPPIAE Cif., Ann. Mycol., Vol. XXXI, pag. 146 (1933).
A typo differt setis abundantibus, longis (250—740 u.); sporis minoribus, 30—34 × 9—11.
On *Lippia nodiflora* (L.) L. C. Rich. (Verbenaceae). New records on the same host plant are: Llano Costero, prov. Santo Domingo, Ciudad

Trujillo, road to La Caleta, 18.XII.1929, coll. E. L. E. (*N° 2848*). Cordillera Central, prov. Sejbo, El Jovero, Punta Icacos, 26.VII.1930, coll. E. L. E. (*N° 4607*).

In the type specimen the abundance and density of the colonies, covering all or almost the upper surface of the leaves (rarely on the lower surface), as well as the enormous abundance of setae, are characteristic of the variety. In other specimens the colonies are less developed, and the number of the setae, altough quite variable, is generally greater; see CIFERRI (1933).

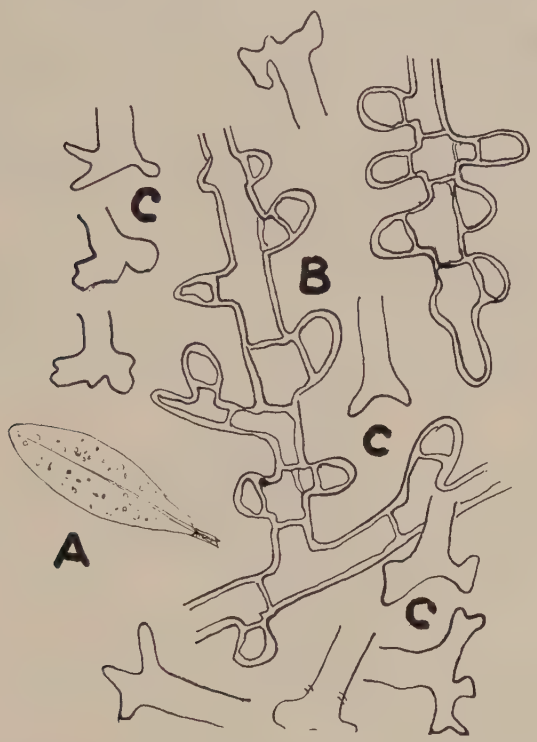

Fig. 25. *Meliola ekmaniana* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia; *c*) Tip of the hyphae.

90. * **MELIOLA** (Irenopsis) **EARLEANA** Cif., n. nom.

Syn. *Meliola compacta* Earle, Bull. N. Y. Bot. Gard., Vol. III, pag. 306 (1905), non *M compacta* (Lév.) Speg.

Irenopsis compacta Stev., Ann. Mycol., Vol. XXV, pag. 434 (1927).

On *Rhacoma crossopetalum* L. (= *Crossopetalum rhacoma* Crantz) (Celastraceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, road to La Caleta, coll. R. C. (without number).

Our specimen is sterile, and the species has been quite doubtfully determined according the vegetative characteristics. The species has been previously found in Puerto Rico only.

91. * MELIOLA EARLII Stev., Ill. Biol. Mon., Vol. II, pag. 47 (1916).

On *Pilea propingua* Wedd. (Urticaceae), Cordillera Central, prov. La Vega, near Río Maimón, coll. E. L. E. (*N° 4186*).

The formula of our specimen is: 3111.2221. The setae are obtuse to acute, 175—220 long; the spores, 4-septate, are shorter than in the description (25—28 in lenght, 8—12 thick). The species has been previously found in Puerto Rico.

92. ** **MELIOLA** (Eumeliola) **EKMANIANA** Cif., n. sp. (Fig. 25).

Coloniis nigris, irregularibus vel rotundatis, epiphyllis, aggregatis sed non confluentibus, 1—3 mm., pro more 2 mm. diam., hyphis myceliaribus brunneo-fuscis, septatis, diverse ramosis, 7,5—9 crassis; hyphopodiis capitatis numerosis, unilateralibus vel alternantibus, rarissime oppositis, frequenter densissime stipatis et continue seriatis, cellula superiore sphaeroidea vel ovoidea, 12—15 diam. vel 14—16 × 11—15, cellula basali distincta 8—12 longa; hyphopodiis mucronatis, ellipticis aut subcylindricis, 20—22 × 9—11; setis myceliaribus consuete apicibus bifurcatis, ramis simplicibus gerentibus, rarissime 3-vel plurifurcatis, nigris, opacis, 165—260 longis, 10—12 crassis, ramulis apicalibus brevioribus (12—16 longis); peritheciis nigris, sphaerico-applanatis, glabris, 160—200 diam.; ascis evanescentibus, 3—4 sporis; sporis brunneolis, 4-septatis, ad septa constrictis, 36—42 × 14—16.

HAB.: in pagina superiore foliorum *Schoepfiae obovatae* Ch. Wr. (Olacaceae) sine loco temporibusque, leg. E. L. E. (*N° 2886*).

The formula of this species is $31\frac{1}{3}$ 3.4221. Apparently, this is the first Meliolinea found on members of the Olacaceae family. The setae, normally bifurcate, are of any transitional stage from the plurimous branching to the simple, umbranched type, not to mention the variability of the apical dentate tip.

93. ** **MELIOLA** (Irenopsis) **EKMANII** Cif., n. sp.

Coloniis nigris effusis, quasi indeterminatis, pro more hypophyllis; hyphopodiis capitatis unilateralibus vel oppositis, sub-sphaericis usque sub-elongatis vel irregularibus, 7,5—15 latis, saepe invertitis, cellula basali 3,5—5 longa; hyphopodiis mucronatis abundantibus, oppositis vel unilateralibus, apice subacuminatis, ampulliformibus, basi incrassatis, 11—15 × 5—8; mycelio ramoso, brunneo-fusco, 2—7 crasso; perithecia pauca, dilute brunnea usque nigra, 150—175 diam.; appendicis vermiformibus paucis, pro more 2—4, setis simulantibus, rectis, basaliter dilute brunneis, apicaliter sub-hyalinis obtusisque, 85—115 longis, non rarius apicaliter geniculatis; projectionis perithecialibus rotundatis, non conicis; ascis non visis; sporis pro more 4-septatis, brunneis usque fuscis, variabilibus, ovatis, ellipticis biapiculatisve, in media 36 × 15, ad septa leviter constrictis.

HAB.: in foliis *Lygodii oligostachyi* (W.) Desv. (Filices), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, leg. E. L. E. (*N° 2742*).

Colonies black, effuse, almost indetermined, generally found on the lower surface of the leaf, covering the sori of the host plant; mycelium well branched, dark-brown, septate, 2—7 in thickness; capitate hyphopodia unilateral or opposite, sub-spheric, sub-elongate or even irregular in shape, 7,5—15, rarely more in diam., head cell frequently inverted (trasversal as related to the stalk cell), basal cell 3,5—5 in lenght; mucronate hyphopodia very abundant, opposite or unilateral, sub-acuminate at the tip, enlarged at the base, bottle-shaped, 11—15 in lenght, 5—8 in thickness; perithecia light-brown, dull-brown or black in color, 150—175 in diam., with rounded, not conical projections; perithecial appendages

few in number (2—4, rarely 3—6 for each perithecium), straight, light-brown at the base, sub-hyaline at the tip, also sub-inflated or geniculate at the tip, as a rule obtuse, 43—75 up to 85—115 in length; if not well developed, the setae are like to vermiform appendages, but, if well developed, they are evidently true setae, in spite of the fact that are delicate and flessible; perithecia spheroidal, black, opac, with an indistinct structure, also 50—80, rarely to 100—115 in diam.; asci not seen; spores light-brown to dull-brown, 4-septate, variable in shape, from subcurved to straight, ovate, elliptic or biapiculate, slightly narrowed at the septa, as a rule 36 by 15.

This species is clearly allied to *M. tortuosa* Wint., that, typically found on members of the Piperaceae family, has been indicated also on the genus *Dicksonia* (Filices); but it is distinct by a number of characteristic.

The characteristics of the setae are peculiar; if young or not well developed, real vermiform appendages are evident, but are gradually elongating and opacized, until the resemblance with true setae is sensible: the only difference is that these setae are more delicate, flexible and "souple". This is another reason for disagreeing with the generic splitting of the genus *Meliola*.

94. MELIOLA ENTADAE Hansf., Proc. Linn. Soc. London, Vol. CLX, pag. 124 (1949).

Fig. 26. *Meliola epiviscum* Cif. Habitus of the fungus.

Syn. *M. teramni* H. et P. Syd. var. *entadae* Cif., in Herb. On *Entada gigas* (L.) Faw. et Rendle [= *E. scandens* (L.) Benth.] (Leguminosae). New record: Cordillera Central, prov. Santo Domingo, La Cumbre, 275 m., 3.III.1930, coll. E. L. E. (*N° 245*). The mycelium is light-brown in color, very crooked, composed of curved, sigmoid, short segments, each one having, as a rule, one capitate hyphopodium; mycelic setae sub-fasciculate, not abundant, 290—500 in lenght, shortly and very rarely branched, normally obtuse; capitate hyphopodia 14—15 long at all, mostly alternate or unilateral, very rarely opposite, with the head cell sub-cylindric or spheric to truncate, never lobed, 10—11 by 8—10, stalk cell 3—5; perithecia 60—130 in diam.; spores 38—40 by 14—16. Endemic.

95. ** **MELIOLA** (Irenina) **EPIVISCUM** Cif., n. sp. (Fig. 26).

Coloniis pro more epiphyllis, nigris, diffusis, saepe marginalibus, 1—5

mm. diam., in sicco indistinctis; myceliis ex hyphis nigridulis, laxe intertextis, parce irregularibusque ramosis, rectis vel flexuosis, septatis, 5—6 crassis; hyphopodiis capitatis paucissimis, pro more unilateralibus, rarius alternatis, singulis, cylindroideis, ellipticis aut ovoideis, simplicibus, sine cellula basali, 6—8 × 10—12, vel 9,5—11 diam.; hyphopodia mucronata setis myceliaribus perithecialibusque carentibus; peritheciis nigris, paucis, duris, in sicco collapsis, 90—120 diam.; ascis evanescentibus; sporis brunneis ad septa constrictis, pro more 4-septatis, rarius 3-septatis, ellipticis aut cylindraceis, apicibus rotundatis, 46—56 × 13—16.

HAB.: in pagina superiore foliorum *Dendrophthorae biseriatae* Urb. (Loranthaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, leg. E. L. E. (sine numero).

Formula: $\frac{2}{3}$101.5220. This species, on account of the scarce and rudimentary capitate hyphopodia, the absence of mucronate hyphopodia and setae, 3—4 septate spores, and generally simple structure of the *Meliola*,

Fig. 27. *Meliola erithalidis* (Cif.) Hansf.
Habitus of the fungus.

is certainly one of the most primitive (or regressive) forms of the Meliolineae. Distinctly different from all other glabrous *Meliolae*, it is, in part, allied to the endemic *M. dendropemonis* Petr. et Cif., found on *Dendropemon*, of the same family, chiefly for the allways 3-septate spores. Almost all others characteristics are different, as seen from the formula of the latter species: 2111.4221. This is the second Meliolinea found on members of the Loranthaceae family.

96. MELIOLA ERITHALIDIS (Cif.) Hansf., Proc. Linn. Soc. London, Vol. CLX, pag. 130 (1949). (Fig. 27).

Syn. *Meliola kaduae* Stev. var. *erithalidis* Cif., Ann. Myc., Vol. XXIX, pag. 288 (1931).

On *Erithalis parviflora* Griseb. (Rubiaceae). New records: Cordillera Septentrional, prov. Puerto Plata, Sosua, coral reef, 20.III.1930, coll. E. L. E. (*N° 3334*). On *E. fruticosa* L. (new host plant), Llano Costero,

prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2797/2792*).

For a mistake, on the description of the variety, the formula has been indicated as identic to the formula of the type species; on the contrary the former is: 3411.3221, and the latter 3411.3223. The specimen *N° 3334* has been identified on the base of shape and disposition of the capitate hyphopodia, being sterile. Endemic. See CIFERRI (1931, under the varietal name).

97. ** **MELIOLA** (Irenina) **ERYTHROXYLONIS** Cif., n. sp. (Fig. 28).

Coloniis nigris, nitidis, epiphyllis, singulis vel confluentibus, rotundatis, 1—7 mm. diam.; mycelio brunneo-nigro, recto vel tortuoso, irregulariter

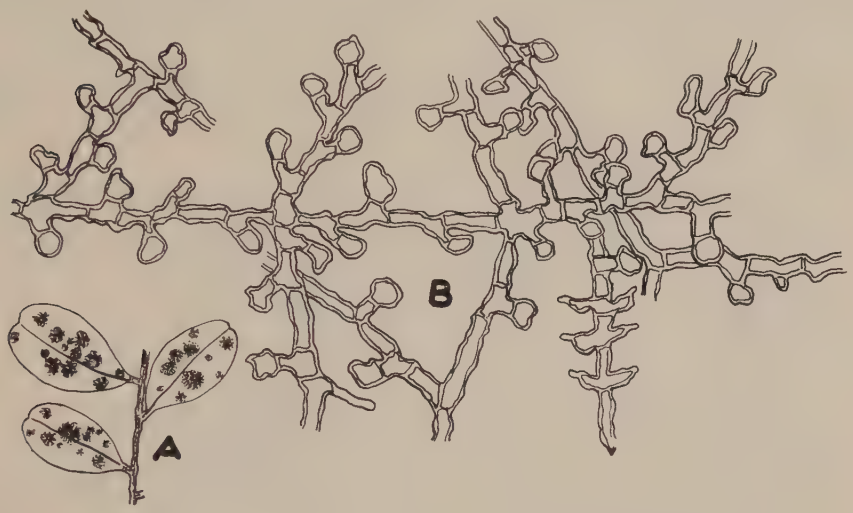

Fig. 28. *Meliola erythroxylonis* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

incrassato, septato, 9—11 crasso; hyphopodiis capitatis alternantibus, rarius unilateralibus, abundantibus, 15—29 longis, cellula apicali variabili usque irregulariter lobata, angulosa, 10—18 × 10—13, cellula basali evidente, 6—10 longa; hyphopodiis mucronatis frequentibus, irregulariter conoideis, 15—22 longis; sine setis; peritheciis nigris, sphaericis, 60—140 diam.; asci 2—4-sporis; sporis obscure brunneis, ellipticis usque cylindraceis, 4-septatis, ad septa constrictis, 36—40 × 21—24.

HAB.: in foliis *Erythroxyli urbanii* O. E. Schultz (Erythroxylaceae), Cordillera Central, prov. Samaná, Los Haitises, prope Cueva de Cal, 5.VII.1930, leg. E. L. E. (sine numero).

Formula: 3101.3320. This is the first Meliolinea found on members of the Erythroxylaceae family. Colonies black, crustose-radiate, superficial, well defined, as a rule found on the upper surface of the leaf, scattered and single to more less confluents, more or less rounded or orbicular, from 1 to 7 mm. in diam.; mycelium brown-blackish in color, composed of straight to tortuose hyphae, irregularly thickened, not rarely unilateral, 15—29 long, head cell very variable in shape, from spheric or ovate to irregularly lobate, allways angulate, straight or curved, 10—18 by 10—13, basal cell evident, 6—10 in lenght; mucronate hyphopodia quite abundant, irregularly conic in shape, thickened at the base, not rarely irregu-

larly thickened, acute to obtuse, more or less thinned at the tip, 15—22 in lenght, base 6—8, tip 4—7 in thickness; mycelic and perithecial setae absent; perithecia black, smooth to rough, spheric, 60—140 in diam.; asci 2—4-spored; spores dull-brown, elliptic or ovate to sub-cylindric, narrowed at the end, 4-septate, narrowed also at the septa, 36—40 by 21—24.

98. **MELIOLA** (Irenina) **ESCHAROIDES** (H. Syd.) Cif., n. comb.
Syn. *Irene escharoides* H. Syd., Ann. Mycol., Vol. XXIV, pag. 316 (1926).
On *Tabernaemontana citrifolia* L. (Apocynaceae), as quoted by CIFERRI and FRAGOSO.
For a typographical slip, it was indicated under the binomial *Irenina saccharoides*. In my opinion, this species may be a glabrous form of the *M. tabernaemontanae* Speg., with slightly shorter spores. When *M. tabernaemontanae* is densely parasitized by other fungi, the setae are very scarce, if not absent, and resembling to this (and other) allied species.

99. MELIOLA EUGENIAE H. Syd., Philipp. Journ. Sci., Ser. C. Bot., Vol. XXI, pag. 133 (1922).
On *Eugenia fragrans* (Sw.) Willd. (Myrtaceae), Cordillera Central, prov. Santiago, San José de las Matas, 11.IV.1930, coll. E. L. E. (*N° 4631*).
This is the second record of this species, previously found in Philippine Islands on the same genus of host plants. The setae are few, obtuse, 200—300 long. The Dominican specimen agree quite well with the description.

100. MELIOLA EVANIDA Gaill., Le Gen. Mel., pag. 102 (1892).
On *Tetragastris balsamifera* (Sw.) O. Kuntze (Burseraceae).
Quoted by TORO (1927), but doubtful; probably is to referred to *M. burseracearum* Stev., *M. evanida* Gaill. being described in Africa on *Strychnos* (Loganiaceae). Of course, *M. evanida* and *M. burseracearum* are, from the morphological standpoint, two allied species, the most outstanding difference being the lenght of branched setae, a characteristic quite variable.

101. MELIOLA FAGARAE-MARTINICENSIS Hansf., Proc. Linn. Soc. London. CLX, pag. 126 (1949).
On *Fagara martinicensis* Lam. (Rutaceae). New record: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 6.III.1930, coll. E. L. E. & R. C. (*N° 3284*).
This species has been referred by CIFERRI to *M. macropoda* Syd., but distinguished as a new species by HANSFORD, because "it is markedly different in the size of all its parts from *M. macropoda*". Really, the size of most of the organs of this species are quite variable, not only from one to another host plant, but also from one to another specimens; e.g., in the specimen *N° 3284* the spores are frequently smaller (32—40 by 13—17), the setae very scarce and obtuse, 620 or less in lenght. See also below.

102. * MELIOLA (Irenina) FAGARICOLA Speg., An. Mus. Nac. Buenos Aires, Vol. XXXII, pag. 352 (1924).
On *Fagara martinicensis* Lam. (Rutaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, La Caleta, 10.II.1930, coll. E. L. E. (*N° 3351*).
This is the first identification of the species outside the type locality (Argentina). This species is clearly different from *M. macropoda* Syd., found on the same host plant also in Santo Domingo (see above under

Meliola fagarae-martinicensis Hansf.). It agree well with the description; the perithecia are smaller (180 or less in diam.), very rough, almost spinulate.

103. MELIOLA FASCICULISETA Cif., Ann. Mycol., Vol. XXXVI, pag. 8 (1938).

On *Psichotria recurva* Ekm. (n. sp. ad interim?) (Rubiaceae).

This is the only record of this species, distributed by ourselves (CIFERRI 1938).

104. MELIOLA FORSTERONIAE (Stev.) Hansf., Proc. Linn. Soc. London, Vol. CLX, pag. 129 (1949).

On *Forsteronia corymbosa* (Jacq.) Mey. (Apocynaceae).

Distributed by ourselves under the binomial *M. tabernaemontanae* Speg. var. *forsteroniae* Stev. Only one collection. See CIFERRI (1933, as variety).

Fig. 29. *Meliola funebris* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

105. ** MELIOLA FRANCEVILLEANA Gaill., Le Gen. Mel., pag. 88 (1892) var. **ABBREVIATA** Cif., n. var.

A typo differt hyphopodiis capitatis pro more oppositis, rarius alternantibus, setis rectilineis, acutatis vel sub-acutatis, non curvatis vel uncinatis; peritheciis majoribus (250—330 diam.); sporis minoribus (30—37 × 9—15).

HAB.: in foliis *Jacquemontiae nodiflorae* (Dear.) G. Don. (Convolvulaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, leg. E. L. E. (*N° 2821*).

Formula of the variety: 3113.3221; formula of the type species: 3113.6231. The type species is apparently recognized only in Africa on *Breweria* of the same family of host plants. No Meliolineae have been identified on *Jacquemontia*.

106. MELIOLA (Irenina) FUNEBRIS Cif., Ann. Mycol., Vol. XXXVI, pag. 9 (1938). (Fig. 29).

On *Omphalea pauciflora* Urb. et Ekm. n. sp. ad interim (Euphorbiaceae).

Only one record of this endemic species, distributed by ourselves. See CIFERRI (1938).

107. MELIOLA FURCATA Lév., Ann. Sc. Nat. Bot., Sér. III, Vol. V, pag. 266 (1846).

On *Coccothrinax argentea* (Lodd.) Sarg. (Palmae), as quoted by CIFERRI (1938) and TORO; on *Oreodoxa regia* H. B. K. [= *Roystonea regia* (H.B.K.) O. F. Cook] (Palmae) and on *Sabal causiarum* (O. F. Cook) Becc. (Palmae)

A species very frequent on *Coccothrinax argentea*; not much frequent on other Palmae. Probably, the specimens on the former host plant are to be referred to the var. *coccothrinacis* Cif. (see below).

New record on *Euterpe globosa* Gaertn.: Peninsula de Samaná, prov. Samaná, Samaná, Laguna, 5.VIII.1930, coll. E. L. E. (without number), Cordillera Central, prov. La Vega, Boneo, Firme del Banilejo, 1050 m., 18.XII.1930, coll. E. L. E. (without number).

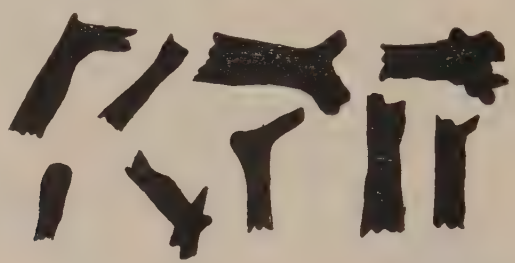

Fig. 30. *Meliola furcata* Lév var. *coccothrinacis* Cif. Tips of the setae.

The setae of the former specimen are very scarce, and the colonies few in number, sub-crustose to effuse, on the upper side of the leaf, more or less rounded, 2—3 mm. in diam. The latter specimen is allied to the preceeding, but the setae are, as rule, entire and the colonies ovate or rounded, 2 to 5 mm. in diam.

108. MELIOLA FURCATA Lév. var. COCCOTHRINACIS Cif., Ann. Mycol. Vol. XXXVI, pag. 9 (1938). (Fig. 30).

On *Coccothrinax argentea* (Lodd.) Sarg. (Palmae); see above.

The less typical specimen in our hands (Cordillera Septentrional, prov. Santiago, Cuesta, m. 300 ca., 11.IV.1930, coll. E. L. E. *N° 4210*), is characterized by a scarce number of simple setae, and an abundant number of setae dentate to sub-dentate at the tip. See CIFERRI and FRAGOSO (1922; 1926, under the type); TORO (1927); CIFERRI (1938).

109. * MELIOLA GAILLARDIANA Stev., Ill. Biol. Mon., Vol. II, pag. 61, (1916).

On the small branches of *Piper aduncum* L. (Piperaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2904*).

Our specimen is clearly allied to *M. gaillardiana* as described in Puerto Rico on the same host plant (as *Piper "aductum"*, pro error), but is is allied also — according the description — to *M. zetekii* Stev. found on

P. paulownifolius in Panama. The setae are shorter than in the description (200 or less in lenght), and the spores are of 32—28 by 9—12.

This is the first record outside of Puerto Rico.

110. * MELIOLA GARCINIAE Yates, Philipp., Journ. Sc., C. Bot., Vol. XIII, pag. 369 (1913).

On *Mammea americana* L. (Clusiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama 14.XII.1929, coll. E.L.E. (*N° 2796*). Another record, without locality and date, collected by the same botanist, under the *N° 3225*.

While the specimen *N° 2796* agree well with the description of *M. garciniae*, the specimen *N° 3225* is slightly different: the spots are not incrustated, but arachnoid, diffuse and amphigenis; the obtuse setae are 650—1000 in lenght; the capitate hyphopodia are cylindric or cylindric-acuminate, lenghtned, and uniform in shape (never sub-globose to ovate) and greater (15—18 by 10—12, instead of 12—14 by 11—12); the basal

Fig. 31. *Meliola glabra* Berk. et Curt. Habitus of the fungus on *Rondeletia ochracea*.

cell is absent or present (0—4 in lenght instead of 8—10); perithecia smaller (130—150 diam. instead of 200—300). The spores are almost of the same size (48—52 × 18—22). The formula of the specimen at hand would be 3111.4323 instead of 3111.5233. See CIFERRI (1933).

111. MELIOLA (Irenina) GLABRA Berk. et Curt., Journ. Linn. Soc. London, Vol. X, pag. 392 (1869). (Fig. 31).

On *Exostema elegans* Krug. et Urb. (Rubiaceae), as a quoted by CIFERRI On *Heteropteris laurifolia* (L.) A. Juss. (= *Banisteria laurifolia* L.) (Malpighiaceae), Cordillera Central, prov. Monte Cristy, 375 m. ca., Vi. 1929, coll. R. C. (*N° 3002*). On the same host plant, Villa Altagracia, 12.II.1930, coll. E. L. E. (*N° 3299*). On *Nectandra coriacea* (Sw.) Griseb. (Lauraceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XI.1929, coll. E. L. E. (*N° 2749*). On *Passiflora* sp. (Passifloraceae), as quoted by CIFERRI and FRAGOSO. On *Psychotria plumierii* Urb. (Rubiaceae), Llano Costero, prov. Santo Domingo, Manielito, in thickets, 11.II.1930, coll. R. C. & E. L. E. (*N° 3074*). On *Rondeletia ochracea* Urb. (Rubiaceae), Cordillera Septentrional, prov.

Santiago, top of Loma Diego de Ocampo, ca. m. 1250, 4.XII.1930, coll. E. L. E. (*N° 4635*). On *Psychotria pubescens* Sw. (Rubiaceae), Cordillera Septentrional, prov. Santiago, Loma Diego de Ocampo, ca. m. 750, 1929, coll. R. C. (*N° 2442*).

Species frequently and heavily parasitized by fungi, so that the determination may be uncertain, as, e.g., in the *N° 2442. 2749, 3002,* and *4635*; frequently associated with *Amazonia psychotriae* (P. Henn.) Theiss. (see also HANSFORD, Proc. Linn. Soc. London, Vol. CLX, pag. 130, 1949). The species is typically found on members of the family Rubiaceae; the specimen on *Passiflora* sp. may be, probably, referred to *M. aristata* Toro. In the specimen *N° 2749* the capitate hyphopodia are elliptic-angulate to elliptic-rounded, slightly lobate or unlobate, 28 by 14—18 in size. For previous quotations see CIFERRI and FRAGOSO (1928 sub *Irenina*); CIFERRI (1931, 1938).

Surely, a heterogeneous species; cfr., e.g., on *Passiflora.*

112. MELIOLA (Irenina) GLABROIDES Stev. Ill. Biol. Mon., Vol. II, pag. 18 (1916).

On *Piper scabrum* Sw. [= *P. peltatus* L.; = *Potomorphe peltata* (L.) Miq.] (Piperaceae), as quoted by CIFERRI and FRAGOSO. The species indicated by both authors on *Nectandra coriacea* is to be referred to *M. glabra* (see above).

New records: on *Piper fuscicostum* Urb. et Ekm. n. sp. ad interim (Piperaceae), Peninsula de Samaná, prov. Samaná, Samaná, Laguna, in El Hoyo, ca. 100 m., 2.VI.1930, coll. E. L. E. (*N° 4176*). On *P. marginatum* Jacq. (Piperaceae), Peninsula de Samaná, prov. Samaná, Sánchez, hillsides, 23.IV.1930, coll. E. L. E. (*N° 4597*). On *P. scabrum* L. (Piperaceae), as above, old fields, 300 m. ca., 30.IV.1930, coll. idem (*N° 4598*). On *P. aduncum* L. (Piperaceae), Llano Costero, Prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 5.XII.1929, coll. idem (*N° 2818*).

The specimen *N° 4598* is densely overgrown by fungi of the genus *Helminthosporium* and others. On *P. fasciculatum* (*N° 4176*) the hyphopodia are variable, the specimen being parasitized, in part, by other fungi; capitate hyphopodia almost entire, with the head-cell ellipsoidal or oblong in shape, not lobed up to subangulate, short-stalked, 14—20 by 9—12; spores variable in shape and size, 32—46 by 11—12, as a rule. It appears to be an extreme, but yet recognizable form of the cycle of *M. glabroides.* On *P. aduncum* (*N° 2818*) the fungus is, apparently, immature, but shape and size of the capitate hyphopodia are typical of the species.

A quite variable species which limit of the variability is to be studied. See CIFERRI and FRAGOSO (1928 p. p., but for the fungus on *Nectandra coriacea*).

113. ** MELIOLA GLIRICIDIAE H. et P. Syd., Ann. Mycol., Vol. XII, pag. 550 (1914) var. **PINETORI** Cif., n. var.

A typo recedit coloniis amphigenis, vel, pro more, in pagina superiore foliorum, rarius singulis, frequenter confluentibus, punctiformibus, 1—1,5 mm. diam.; sporis minoribus, 30 vel minus longis.

HAB.: In foliis *Cassiae pinetori* (Britt.) Urb. (= *Chamaecristae pinetori* Urb.) (Leguminosae), Valle de San Juan, prov. Azua, San Juan de la Maguana, VIII. 1929, coll. R. C. (*N° 2728*).

Formula of the variety: 3111.2221; formula of the type species: 3111. 3221. The type species is known only from the Philippine Islands on *Gliricidia.*

114. ** MELIOLA GREGORIANA Stev., Bishop. Mus. Bull., Vol. XIX, pag. 39 (1925) var. **CONFUSA** Cif. n. var.

A typo recedit mycelio dense intricato-ramoso, anastomosato, subindistincte reticulato; coloniis nigris, velutinis, amphigenis, irregularibus vel circularibus, ephiphyllis, 1—7 mm. diam.; peritheciis 220—260 diam.; sporis 46—52 × 17—20.

HAB.: in pagina superiore foliorum *Smilacis populneae* Kunth. (Liliaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, coll. E. L. E. 15.XII.1929 (*N° 2792*).

The habitus and a few morphological characteristicts of the variety (which formula is 3111.5233) are distinctive from the type species (formula 3111.5233), described on *Dianella* (Liliaceae) from the Hawaii Islands. This is the only species up to-date known for this family, having dentate setae. On the same host plant in Puerto Rico was described the *M. smilacis* Stev., clearly distinct from our variety and from *M. gregoriana*, chiefly for the simple setae.

115. * MELIOLA GUAREAE Speg., An. Mus. Nac. Buenos Aires, Vol. XXIII, pag. 42 (1919).

On *Guarea trichilioides* L. (Meliaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, coll. R. C. X. 1921 (*N° 2446*).

A species well distinct for *M. guareicola* Stev., and firstly recorded in Santo Domingo; known Argentina and Puerto Rico. Our specimen agree perfectly with the description as completed by Stevens; see Ciferri and Fragoso (1926), Petrak and Ciferri (1930).

116. MELIOLA GUAREICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 53 (1916).

On *Guarea trichilioides* L. (Meliaceae); quoted by Ciferri and Fragoso and Petrak and Ciferri. New record of this antillean species on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, coll. E. L. E. 16.II.1930 (*N° 3224*).

117. MELIOLA (Irenopsis) GUAGNARDII Gaill., Bull. Soc. Mycol. France, Vol. VIII, pag. 156 (1892).

On *Turpinia panniculata* Vent. (Staphyleaceae). Quoted by Toro (1927) under *M. "Guidnardii"* pro error. According Stevens, this form should be referred to *M.* (I.) *portoricensis* (Stev.) Cif.

118. * MELIOLA GYMNANTHICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 49 (1916).

On *Gymnanthes lucida* Sw. (Euphorbiaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, coll. R. C. III. 1922 (without number).

First record for Santo Domingo, and probably first record outside Puerto Rico. Our specimen agree perfectly with the original description.

119. ** **MELIOLA** (Irenopsis) **HAPLOA** Cif., n. sp.

Maculis foliaribus nigris, limitatis, rotundatis, 2,5 mm. in diam.; mycelio obscure-brunneo, intricato- anastomoso, ramoso; hyphopodiis capitatis abundantibus, regularibus, cylindraceis ovatisve, alternantibus, 15—20 × 8—12, cellula basali reducta sed evidenti, 2—4 longa; hyphopodiis mucronatis abundantibus, elongatis, sub-cylindraceis usque subconoideis, pro more 25 × 8; sine setis myceliaribus, sed cum setis perithecialibus paucis, nigris, rigidis, rectis vel leniter curvatis, obtusis vel subobtusis, opacis, abbreviatis, 72—100 × 6—8; peritheciis nigris, globoso-compressis, pro more 90—190 diam.; ascis 2—4-sporis, diffluentibus;

ascosporis pro more 4-septatis, brunneis vel nigro-brunneis, ellipticis usque ovatis, ad septa leniter constrictis, 36—40 × 12—14.

HAB.: in foliis *Linocierae dictyophyllae* Urb. (Oleaceae), Sierra de Ocoa, prov. Azua, San José de Ocoa, El Cercado, m. 800 ca., 18.III.1929, leg. E. L. E. (*N° 2855*).

Formula of this species: 3101.3220. Epiphyllous, black, clearly delimited, circular spots of 2—5 mm. in diam., found on the upper surface of the leaf; mycelium dark-brown, croocked, anastomized, with lateral branches inserted up to 45°, 6—8 thick; capitate hyphopodia abundant, regular in shape, cylindric to ovate, alternate, 15—20 by 8—12, with the basal cell small but clearly visible, 2—4 in lenght; mucronate hyphopodia abundant, elongate, sub-cylindric to sub-conic, slightly narrowed at the tip, with an

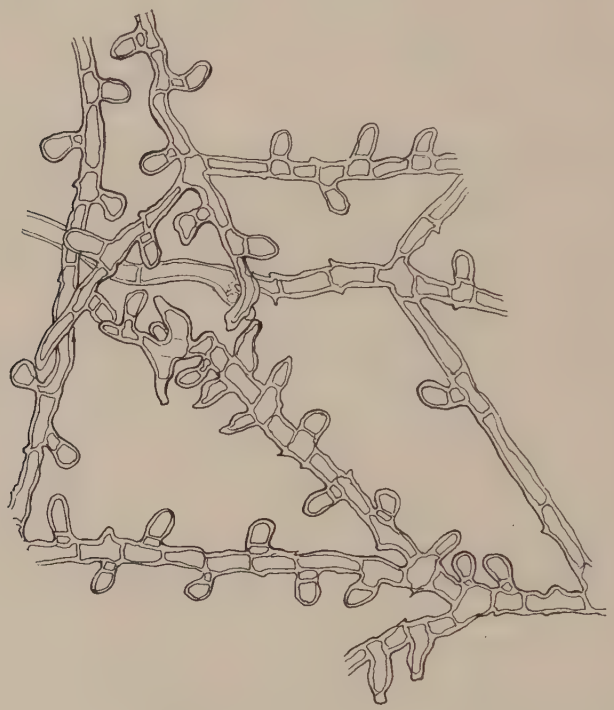

Fig. 32. *Meliola hernandiacearum* Cif. Mycelium with hyphopodia.

average of 25 by 8; no myceliar setae; perithecial setae few, opac, black, short, rigid, straight or slightly curved, 72—100 long, obtuse or sub-obtuse at the tip, 6—8 thick; perithecia black, globose-compressed, collapsed when dry, 90—190 or less in diam.; asci 2—4-spored, diffluent; ascospore as a rule 4-septate, dark-brown to black-brown, narrowed at the septa, elliptic to ovate, 36—40 by 12—14.

A species clearly different from all other described on members of the Oleaceae family, including *M. mayepeae* Stev. described on *Mayepea* (= *Linociera*) (formula 3111.3221) and *M. hispaniolensis* Cif. (see below).

120. ** **MELIOLA** (Irenina) **HERNANDIACEARUM** Cif., n. sp. (Fig. 32).

Coloniis nigris, epiphyllis, isolatis, 1—2 mm. diam.; mycelio fusco-brunneo, ramoso, cum ramis oppositis, rectis vel leviter sinuatis, 7—10

crassis, spinulatis, cum spinulis conico-acuminatis, 2—4 longis; hyphopodia capitata pro more opposita, 16—19 longa, 18—20 separata, cellula apicali ovata vel oblonga, simplicia, pro more uniformia, cum hyphopodiis capitatis, pro more opposita, conoidea, apice recurvato sed obtuso vel truncato, 14—18 longa, 8—10 crassa; sine setis myceliaribus perithecialibusque; peritheciis nigris, sphaericis, isolatis, ruvidis usque levibus, 72—100 diam.; sporis ellipticis, ellipsoideis vel ovoideis, brunneo-nigris, 4-septatis, ad septa leviter constrictis, 43—47 × 18—22.

HAB.: In pagina superiore foliorum *Hernandiae sonorae* L. (Hernandiaceae), prov. Seybo, ad viam Sabana del Hato, 22.VII.1930, leg. E. L. E. (*NH. 1578; N° 4476*).

Colonies small, black, sub-epiphyllic, as a rule single, scattered, rarely sub-confluent, 0,5—2,5 mm. diam., frequently 1—2 mm., found only on the upper surface of the leaf; mycelium composed of dark-brown septate, branched hyphae, with branches almost allways opposite and opened, straight or slightly sinuate, 7—10 thick, spinulated, with prickles 2—4 long, conic and acuminate, scattered and not frequent, as a rule single, irregularly distributed; capitate hyphopodia 16—19 long, opposite rarely unilateral, about 18—20 apart, composed of the head-cell ovate, oblong or slightly irregular, not lobate nor angled, simple, straight or slightly curved, quite uniform in shape, frequently slightly asymmetric, 9—13 by 8—10, with a distinct basal cell 4—6 in lenght; mucronate hyphopodia quite abundant, growing together with the capitate hyphopodia, as a rule opposite, rarely unilateral, conoid, with a recurved tip, obtuse or truncate, 14—18 in lenght, 8—10 thick near the base, 4—5 near the tip; mycelic and perithecial setae absent; perithecia black to dull-brown, spheric, scattered, single, not abundant, rought to almost smooth, 72—100 diam.; asci not seen; spores elliptic, ellipsoid or ovoid, brown-black, with rounded to subacute tip, 4-septate, slightly narrowed at the septa, 43—47 long, 18—22 wide.

Formula of this species: 3101.4310. This is the first glabrous *Meliola* found on a member of the Hernandiaceae family. Shape and size of the capitate hyphopodia are identic to that of *M. consocia* Cif., found on the same host plant, and about on the same locality (see above); but the setae are absent and the capitate hyphopodia, in the present species, are allways opposite; also identic is the habitus of the fungus and the shape of the mycelium; the spores are slightly longer and the perithecia slightly smaller; other differences are but of secondary importance. This is a striking exemple of the artificialness of the glabrous genera isolated from the old, comprehensive genus *Meliola*, which interest is underlined by the fact that the specimen is free from associated Hyphomycetes. An intriguing characteristic is that of the prickled mycelium, which signification is unknown to us. The prickles may represent the beginning or, better, the abortive stalk of the hyphopodia, being frequently opposite to the same organs.

121. MELIOLA HIBISCI (Spr. ex Fr.) Arnaud, Ann. Ec. Nat. Agric. Montpellier, N.S., Vol. XVI, pag. 227 (1918).

On *Hibiscus esculentus* L. [= *Abelmoschus esculentus* (L.) Moench] (Malvaceae) as quoted by Fragoso and Ciferri (1927).

122. ** **MELIOLA** (Irenina) **HISPANIOLENSIS** Cif., n. sp. (Fig. 33).

Sub-parasitica, plagulas nigras, diffusas, sub-indefinitas, 5—10 mm. diam., teniusculas efformans; mycelio ex hyphis brunneo-nigris, saepe

anastomosantibus, septatis, circa 90° ramificatis, 5,5—7,5 crassis; hyphopodiis capitatis irregulariter dispositis, alternantibus vel unilateralibus, 16—18 × 10—13, capitula hemisphaerica aut ellipsoidea, 8—10 u. diam., cellula basali 3—6 u. longa; hyphopodiis mucronatis paucis, oppositis, ampulliformibus usque ovato-elongatis, 13—16 × 6,5—7, setis myceliaribus et perithecialibus carentibus; perithecia nigra, globoso-depressa,

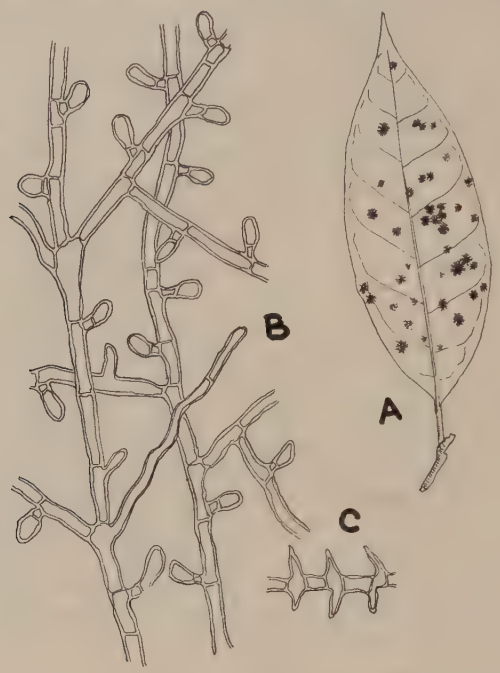

Fig. 33. *Meliola hispaniolensis* Cif. *a*) Habitus of the fungus; *b*) Mycelium with capitate hyphopodia; *c*) Mucronate hyphopodia.

scabriuscula, 130—150 diam.; ascis evanidis, 2—4-sporis; sporis brunneofuscis, ellipsoideis, 4-septatis, ad septa bene constrictis, 31—35 × 14—16.

HAB.: in pagina superiore foliorum *Linocierae domingensis* (Lam.) Knobl. (Oleaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, Coll. E. L. E. (*N° 2876 bis*).

Frequently associated, also on the same spot, with *Dothidella parryi* (Farl.) Theiss. et Syd. Formula of the species: 3101.3220, as in *M. haploa* Cif.

Other record: Península de Samaná, prov. Samaná, Pan de Azúcar, shrub forest, ca. 500 m., 5.VIII.1930, coll. E. L. E. (*N° 4595*), on the same host plant. This specimen possess spores slightly greater (36—48 by 17—19), capitate hyphopodia less dense and with more elongate head cells; mycelium looser than in the type specimen.

The comparison of *M. hispaniolensis* with *M. haploa* is a striking example of the incongruency of the generic splitting of the comprehensive genus *Meliola*, because both species are morphologically and biometrically identic, differing for the presence or absence of perithecial setae (both specimens being unparasitized by overgrowing fungi). In our opinion, of course, the species is only one, with or without perithecial setae.

M. (Irenina) *ditricha* K. et C., originally described on members of the Celastraceae family (formula 3101.5340) has been indicated also on Oleaceae, but it is well distinct from both species on *Linocierae.*

123. MELIOLA (Irenopsis) HURAE H. Syd., Ann. Mycol., Vol. XXVIII, pag. 56 (1930). (Fig. 34).

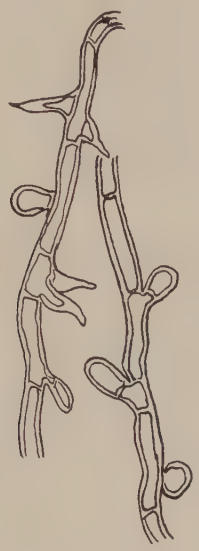

Fig. 34. *Meliola hurae* H. Syd. Mycelium with hyphopodia.

On *Hura crepitans* L. (Euphorbiaceae), quoted by Ciferri (1928) and confirmed by the late H. Sydov.

An abundant species, well diffused in Santo Domingo, labeled, in the herbarium, as *Meliola* (Irenopsis) *neglecta* Ekm. et Cif., n. sp. New records on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 16.II.1930, coll. E. L. E. (*N° 3019*). Valle del Cibao, prov. La Vega, Cotuý, at Río Yuna, 18.IV. 1930, coll. idem (*N° 4621*). Península de Samaná, prov. Samaná, Samaná, near the town, common, 2.V.1930, coll. idem (*N° 4622*). Here a general description of the species based on many specimens: diffuse, small, unclearly visible spots, isolated, scarce, more or less circular, generally 1—2 mm. diam., rarely to 3 mm.; mycelium poor, irregularly branched, with the branches irregularly inserted, brown, septate, 5,5—7 thick, hyphopodia scarce, generally capitate and mucronate ones on the same hyphae, distant one from other; capitate hyphopodia regularly opposite or also alternate, rarely unilateral, normally spheric to sub-spheric, also elliptic, cylindric, truncate, acuminate, etc., 15—22 by 11—13, with a stalk cell, 2,5—4 long; mucronate hyphopodia irregularly bottle-shaped, with a broad base, and an acuminated tip, 17—19 by 4—7,5; mycelic setae lack; perithecia black, spheric-depressed, scarce 87—98, with a few (1 or 2) appendages each one; setae as uniform appendages, straight, flattened, light-brown, with a clearer tip, obtuse, 66—87 by 5—6,5; asci not seen; spores 4-septate, generally subelliptic, slightly constricted to the septa, brown, 31—35 by 14—16. Formula: 3201.3210. This neglected species

very frequent on this host plants, is a notable species, differing from all other species of the subgenus *Irenopsis* up to-date known. The specimen *N° 4621* is poorly developed. In the specimen *N° 4622* the spores are of 33 by 11; capitate hyphopodia 87—98 in lenght; setae 66—87 long.

124. MELIOLA HYMENAEICOLA Frag. et Cif., Bol. R. Soc. Esp. Hist. Nat., Vol. XXVI, pag. 471 (1926).

On *Hymenaea courbaril* L. (Leguminosae). An endemic species described by Fragoso and Ciferri (1926, 1928) and quoted by Ciferri (1931) Petrak and Ciferri (1930); Stevens (1917, sub *Irene*). Not infrequent; new record: Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2880*).

125. ** **MELIOLA** (Irene) **HYPODORIA** Cif., n. sp. (Fig. 35).

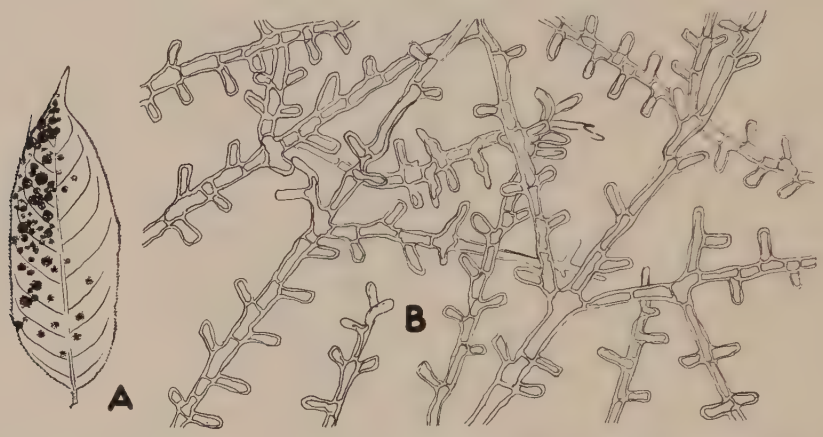

Fig. 35. *Meliola hypodoria* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

Maculis epiphyllis, rubro-brunneis vel purpureo-brunneis, quasi indelimitatis, singulis confluentibusque, sed coloniis solo hypophyllis, parasiticis, nigris, carbonaceis usque velutinis, rotundatis, isolatis et bene delimitatis usque confusis, 1—3 mm. diam.; mycelio ex hyphis oppositis, repetiter ramosis, plus vel minus radiatis, brunneis, ex segmentis rectis usque sinuosis efformato, 6—8 crasso; hyphopodia capitata numerosa, opposita, alternantia vel unilateralia, pro more 15—25 distantia, 16—20 longa, cellula apicali simplicia, cylindraceo-obtusata usque cylindraceo-rotundata, etiam irregulari, non lobata, 10—15 × 6—8, cellula basale plus vel minus evidenti, abbreviata usque carente; hyphopodia mucronata pauca, opposita vel non, hyphopodia capitata intermixta, 12—15 longa, 6—8 usque 3—4 crassa, irregulariter ampulliformia, recta, apice acutato vel sub-acutato; sine setis myceliaribus perithecialibusque; appendicibus perithecialibus vermiformibus paucis, nigris, flexuosis, apicaliter simplicibus vel subdentatis aut leviter inflatis, 145—175 longis, 9—11 crassis; peritheciis aggregatis vel sparsis, nigris, carbonaceis, ruvidis, 115—160 diam., ex stroma inciso vel lobato oriundis; asci 2—6-sporis; sporis brunneis vel fusco-brunneis, 4-septatis, ad septa non constrictis, cylindraceis, apicibus rotundatis, 39—42 × 14—16.

HAB.: in pagina inferiore foliorum *Casearíae bicoloris* Urb. (Flacourtiaceae) Peninsula de Samaná, prov. Samaná, prope viam Samaná, El Rincón, prope Coyó, 2.VIII.1930, leg. E. L. E. (*N° 4211*).

An interesting species, clearly but locally parasitic on leaves. Spots visible on the upper side of the leaves, reddish-to purplish-brown, not well or not at all delimitate, frequently with brownish or blackish shades, confluent or more or less single; colonies found only on the lower side of the leaves, parasitic, black, carbonaceous to velvety, more or less rounded, frequently with a black centre, and blackish near the periphery, uniform or radiate, scattered and single and well delimitate to partly confluent, 1—3 mm. diam.; mycelium formed by hyphae oppositely and many-branched, more or less regularly radiate, brown, slightly septate, with the segments straight or curved, rarely also sinuose, 6—8 in thickness; capitate hyphopodia abundant, opposite, alternate or unilateral, from 15 to 72 apart (as a rule 15—25), 16—20 long, head cell simple, cylindric-obtuse to cylindric-rounded, rarely truncate or spathulate, also ovoid-cylindroid, never angulate nor lobed, 10—15 by 6—8, stalk cell evident or not, short (3—7 in lenght), not rarely absent; mucronate hyphopodia very few, opposite or not, mixed with the capitate hyphopodia, 12—15 long, 6—8 thick at the base, 3—4 at the tip, irregularly bottle-shaped, straight, thickened, with an acute or subacute tip; mycelic and perithecial setae absent; vermiform perithecial appendages few in number, black, flexible, with an obtuse brown to light-brown tip, not rarely sub-dentate to very slightly inflate or enlarged tip, 9—11 in thickness, 145—175 in lenght, as a rule 3—6 for each perithecium; perithecia aggregated or sparse, black, carbonaceous, rough, with the basal border irregularly incise or lobed, 115—160 in diam.; asci 2—6-spored; spores brown to dull-brown, 4-septate, not narrowed at the septa, perfectly cylindric, with rounded ends, 39—42 by 14—16.

This species on *Casearia* is clearly different from *M.* (Irene) *natalensis* Dodge and varieties, found in Africa on members of the Flacourtiaceae family, in many ways: parasitic habit of this species, shape of capitate hyphopodia, size of vermiform appendages, 4-septate spores, and so on; but the general aspect of both species is clearly allied. In addition, thickened, black, sinuate mycelic hyphae, never fructified, are present in our specimen, and probably pertaining to another species.

126. MELIOLA (Irenina) HYPTIDICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 484 (1917).

On *Hyptis capitata* Jacq. and *H. verticillata* Jacq. (Labiatae), quoted by Toro under the binomial *Irene hyptidicola* (Stev.) Toro in Santo Domingo. New records: on *H. verticillata* Jacq. (idem), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 6.III.1930, coll. E. L. E. (*N° 3285*); ibid. 18.II.1930, coll. idem. (*N° 3038*); on *H. scoparia* Poit. (idem), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930 coll. idem (*N° 2895*); on *H. capitata* Jacq. (idem), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. idem (*N° 3080*); on *H. pectinata* (L.) Poit. (idem), as above (*N° 3081*). This neotropical species is very frequently associated, on the same leaf if not on the same spot, with *Dimerina eutricha* (Sacc. et Berl.) Theiss. et Syd. Many determinations are somewhat doubtful, the colonies being intensively parasitized. For the previous quotations, see Stevens (1917, sub *Irenina*); Toro (1927,sub *Irene*).

127. MELIOLA ILICICOLA Hansf., Proc. Linn. Soc. London, Vol. CLX, pag. 126 (1949).

On *Ilex montana* (Sw.) Griseb. (Aquifoliaceae), Cordillera Central, prov.

Azua, San Juan de la Maguana, Loma la Vieja, in pineland, ca. m. 1300, 28.VIII.1929, coll. E. L. E. & R. C. (*N° 2852*).

This species has been distributed by ourselves under the binomial *M.* (Irenina) *lagerheimii* Gaill. (see below), but HANSFORD erected a new species for the mycelial setae found in unparasitized colonies, as well as for smaller spores than those described for the latter species. Really the mycelic setae are present or not, also in specimens not overgrowth by fungi, so that the sub-generic systematic position is uncertain. See also under *M. lagerheimii*.

128. MELIOLA (Irene) INERMIS Kalch. et Cooke, Grev., Vol. IX, pag. 34 (1880).

On *Salvia constanzae* Urb. (Labiatae). An intertropical species quoted by CIFERRI (1938).

129. MELIOLA INTEGRISETA Speg., An. Mus. Nac. Buenes Aires, Vol. XXXII, pag. 376 (1924) var. ALLOPHYLI Cif., Ann. Mycol., Vol. XXIX pag. 286 (1931).

On *Allophylus cominia* Sw. (Sapindaceae). New records on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 27.II.1930, coll. R. C. & E. L. E. (*N° 3347*). Cordillera Septentrional, prov. Puerto Plata, Sosúa, 20.III.1930, coll. E. L. E. (*N° 3333*).

Early recorded in Santo Domingo under *M. ambigua* Pat. et Gaill. In the specimen *N° 3347* a few setae (normally localized around the perithecia), obtuse, no more than 250 in lenght, are present; the perithecia are 200—225 in diam.; the spores are 39—41 by 13—15. The specimen *N° 3333* is very peculiar, lacking of mycelial setae, but with 4—6 perithecial setae, 114—200 in lenght (usually 87—150); the capitate hyphopodia are scarce and irregularly distributed, 26 apart, exceptionally up to 87, but also nearer to very near; segments of the mycelium completely without hyphopodia are easily observed; the capitate hyphopodia are ellipsoid to cylindric, rarely ovoid, never acuminate or lobate. As this specimen is not parasitized by other fungi, following this morphology, the specimen should be attributed to the subgenus *Irenopsis*, in spite of the fact that it is clearly derivated from *M. integriseta* var. *allophyli*. If adscribed to the subgenus *Irenopsis*, it appears allied (but distinct) to *M. cupaniae* Stev. and *M. araneosa* Syd., both described on members of the Sapindaceae family.

See TORO (1927 under *M. ambigua*); PETRAK and CIFERRI (1930, 1932, under the same binomial); and CIFERRI (1931).

130. MELIOLA INTRICATA H. et P. Syd., Philipp. Journ. Sci., C. Bot., Vol. VIII, pag. 268 (1913). (Fig. 36).

On *Rhynchospora marisculus* Nees (Cyperaceae). New record on the same: Cordillera Septentrional, prov. Puerto Plata, Sosúa, Cabarete, 26.III.1930, coll. E. L. E. (*N° 3331*). On *Cladium mariscus* (L.) R. Br. (ibid.), Llano Costero, prov. Santo Domingo, Ciudad Truijllo, shores of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2772*).

This species is clearly allied to *M. uleana*, differing by the very abundant hyphopodia (both similar in shape, but with the head cell, as a rule, cylindric or elongate), thicker setae (but not allways), variable from acute to sub-obtuse; mycelium densely crooked and not loose, intricate, well developed. In conclusion, *M. intricata* may be classified as a variety of *M. uleana*.

The specimen on *Cladium mariscus* (which formula is: 3111.3224) have the setae longer than in the type (1000 or more by 13—15) and the mycelium not net-like. In a certain way, this specimen is opposite to the var. *major* BEELI of the same species, which spores are greater and setae smaller. See CIFERRI (1938).

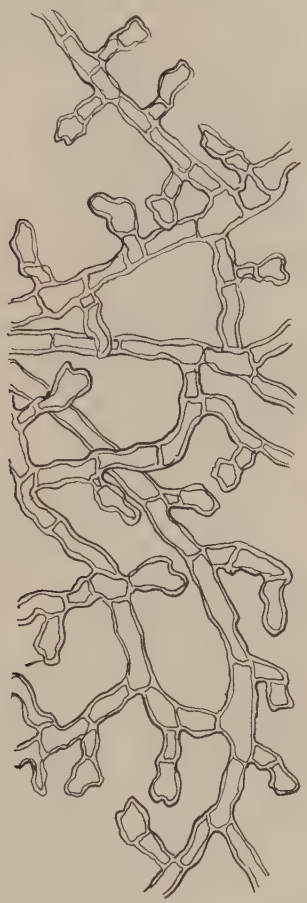

Fig. 36. *Meliola intricata* H. et P. Sydow.
Mycelium with hyphopodia.

131. MELIOLA IPOMOEAE Earle, Muhl., Vol. I, pag. 10 (1901).
On *Ipomoea* sp. (Convolvulaceae), as quoted by CIFERRI and FRAGOSO (1926). To be referred to *M. malacotricha* Speg., according STEVENS (Ann. Mycol., Vol. XXVI, pag. 227. 1928).

132. * MELIOLA (Irenina) IRREGULARIS Stev., Ill. Biol. Mon., Vol. II, pag. 15 (1916). (Fig. 37).
On *Justicia comata* (L.) Lam. (Acanthaceae), Cordillera Central, prov. Samaná, Sabana de la Mar, 9.VII.1930, coll. E. L. E. (*N° 4581*).
Apparently this is the second record of this species, described on *Hygrophila* from Puerto Rico. It agree well with the description; the mycelium is loose, and does not form a close network (probably not completely developed); spores very irregular in shape, as described by

STEVENS. Associated with an undeveloped Microthyriacea showing small, plurilobate, irregular hyphopodia, without mature thyriothecia.

133. * **MELIOLA** (Irenina) **ISERTIAE** (Stev.) Cif., n. comb.
Syn. *Irenina isertiae* Stev., Ann. Mycol., Vol. XXV, pag. 460 (1927).
On *Palicourea domingense* (Jacq.) P. DC. (Rubiaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. E. L. E. (*N° 3091*).

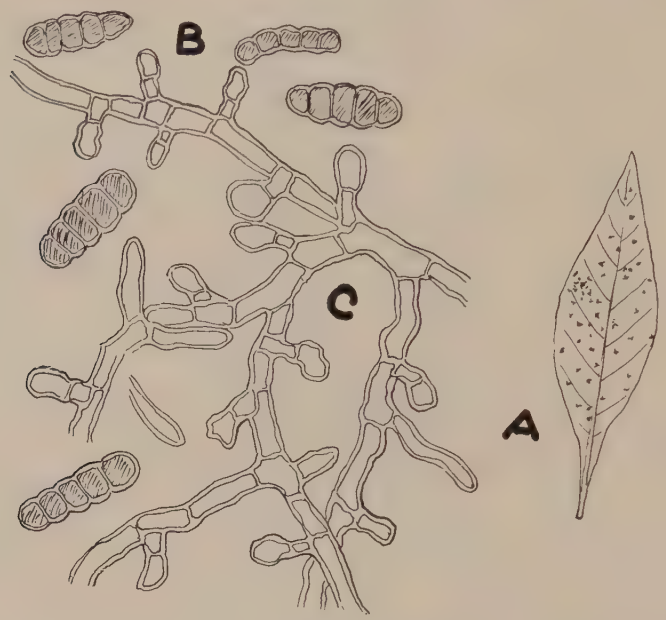

Fig. 37. *Meliola irregularis* Stev. *a*) Habitus of the fungus; *b*) Spores; *c*) Mycelium with hyphopodia.

It may be that this specimen belongs to *M. mayaguesiana* Stev., although agreeing well with the description of the neotropical species *M.* (Irenina) *isertiae*. It is too intensively parasitized for an accurate determination. No "adscending branches" were observed. It is placed in this glabrous *Meliola* primarily on account of the absence of setae and the size of the spores.

Described on *Isertia* and *Psychotria* in Panama, it is new to Santo Domingo.

134. MELIOLA ISOCHAETA Cif., Ann. Mycol., Vol. XXXVI, pag. 10 (1938). (Fig. 38).
On *Rondeletia brachycarpa* (Griseb.) Wright (Rubiaceae); new record on the same locality as the type specimen (Llano Costero, prov. Santo Domingo, Manuelito, m. 150 ca., 12.II.1930, coll. E. L. E. *N° 3212*).
In addition to the discussion appended to the description of this endemic species, it may be noted that the same is distinct from *M. mayaguesiana* Stev. and from *M. kaduae* Stev. in having the setae slightly dentate at the tip. In the specimen *N° 3212* the setae are quite different from the mycelial (330—450 in lenght) to the perithecial (170—340 in lenght), so that it appears to be intermediary between *M. isochaeta* and

one of the *Meliolae* with mycelic setae differing from the perithecial. See CIFERRI (1938).

135.*MELIOLA IXORAE Yates, Philipp. Sci., C. Bot., Vol. XII, pag. 365 (1917).

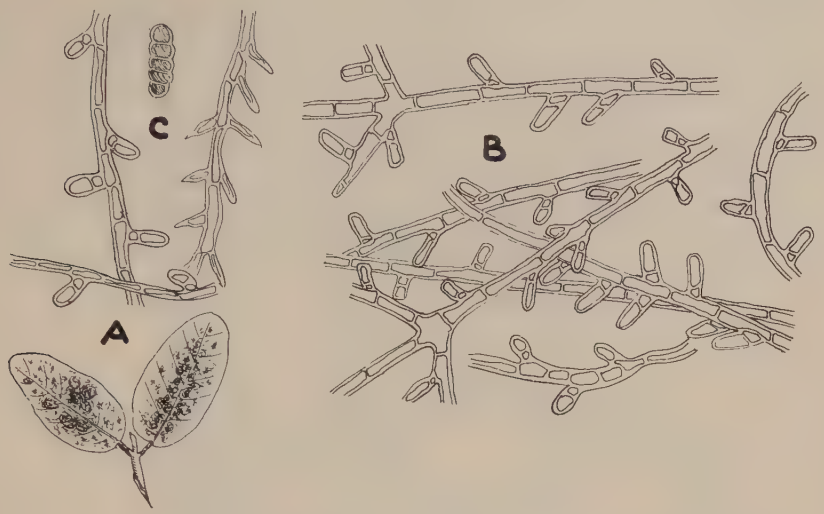

Fig. 38. *Meliola isochaeta* Cif. *a*) Habitus of the fungus; *b*) Mycelium with capitate and mucronate hyphopodia; *c*) spore.

On *Ixora ferrea* (Jacq.) Benth. (= *Sideroxylon ferreum* Jacq.) (Rubiaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, in the fields, IV. 1928; coll. R. C. (without number).

Apparently this is the first record outside the Philippine Islands, on the same genus of the host plant. Our specimen agree very well with the description, but the mycelic setae are as described by STEVENS (Ann. Mycol., Vol. XXVI, pag. 280. 1928), acute. The formula is: 3111.3223.

136. ** MELIOLA JATROPHAE Stev. Ill. Biol. Mon., Vol. II, pag. 48 (1916) var. **ADELIAE** Cif., n. var.

A typo recedit setis myceliaribus acutatis longioribus (usque 600), peritheciis majoribus (130—150 diam.).

HAB.: in foliis *Adeliae ricinellae* L. (Euphorbiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2775*).

Formula of the variety: 3111.2313; formula of the type species: 3111. 3221. This variety is clearly allied to the type species, of which the characteristic of the short and broad spores (here 30—35 by 12—16) are mantained; also, but less, for the insertion of the capitate hyphopodia, directed forward an acute angle. The type species, described and found only in Puerto Rico on *Jatropha*, is not known for Santo Domingo. No Meliolineae are previously found on *Adelia*.

137..* MELIOLA JURUANA P. Henn., Hedwigia, Vol. XLIII, pag. 365 (1904).

On the upper surface of the leaves of *Lonchocarpus latifolius* (Willd.) H. B. K. (Leguminosae) Cordillera Septentrional, prov. Puerto Plata, Loma Isabel de Torres, coll. E. L. E. (without data and number).

First record for Santo Domingo of this South American species. The colonies are mostly epiphyllous, black, circular, 2—5 mm. diam., velvety to arachnoid; mycelium dull-brown, 7—10 in thickness, oppositely branched, reticulate-radiate, densely septate; capitate hyphopodia as a rule alternate, rarely opposite or unilateral, straight or slightly bent, 20—30 in lenght, with the head cell cylindroid, rounded or irregular, not angular, 10—18 × 8—18, stalk cell cylindric, 5—10 long; mucronate hyphopodia intermixed with the capitate, or not at all, opposite or alternate, bottle-shaped, more or less curved, 12—18 × 8—12, with a quite long neck, also bent, 2—4 in thickness; mycelial setae few and scattered, straight, black, opac, 120—190 in lenght, 7—10 in thickness, branched at the tip, with 1—3 branches of one half of the total lenght; perithecia rough, globose-compressed, 120—180 in diam., black, membranaceous; asci not observed; spores brown to dark in color, cylindric or cylindroid with rounded ends, 4-septate, slightly narrowed at the septa, 40—48 by 15—20.

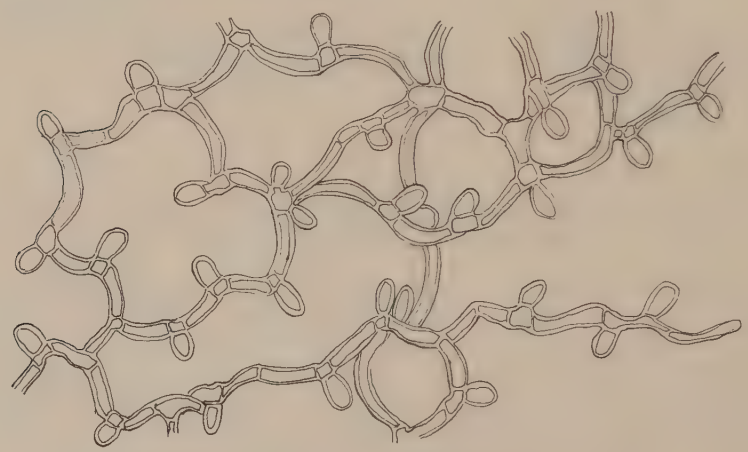

Fig. 39. *Meliola kaduae* Stev. Mycelium with hyphopodia.

138. * MELIOLA KADUAE Stev., Bishop Mus. Bol., Vol. XIX, pag. 30 (1925). (Fig. 39).

On *Coccocypselum repens* Sw. (Rubiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 275 ca., 3.III.1930, coll. E. L. E. (*N° 3214*). On *C. tenue* Urb., Cordillera Central, prov. Seybo, El Jovero, road to El Liar, 17.VII.1930, coll. idem (*N° 4216*).

This is the first record of the species oudside the type locality (Hawaiian Islands). In the specimen *N° 3214* the myceliar setae are shorter (220—300 instead of 650), and the perithecial setae are of the same lenght. The mycelium is very crooked but, in a general way, the fungus on *Coccosypselum* agree well with the description on the Hawaiian material. The specimen *N° 4216* is heavily parasitized so that the setae, no more than 220 in lenght, are few in number; perithecia of 90—100 in diam.; spores 54—58 by 22—26; capitate hyphopodia far apart (58—72), one for each angle of the almost sigmoid segment of the mycelic hyphae.

139. **MELIOLA** (Irenina) **KERNIANA** Cif., Ann. Mycol., Vol. XXXVI, pag. 10 (1938). (Fig. 40).

On *Bactris plumeriana* Mart. (Palmae). Only one record of this endemic species; see CIFERRI (1938).

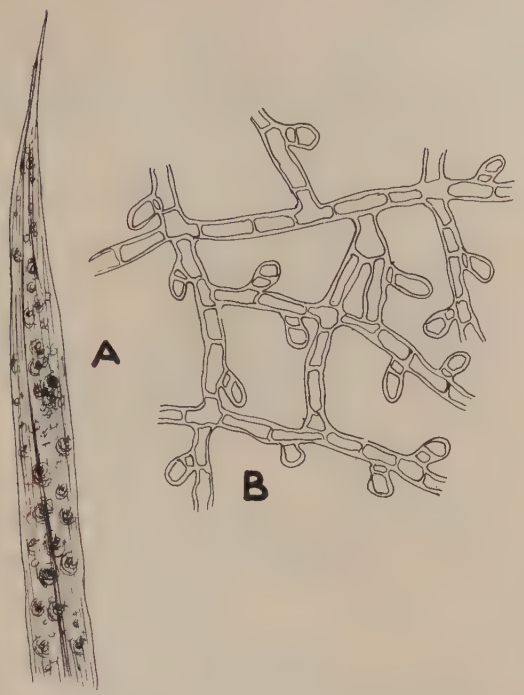

Fig. 40. *Meliola kerniana* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

140. MELIOLA (Chaetomeliola) KRUGIODENDRI Cif., Ann. Mycol., Vol. XXXVI, pag. 11 (1939). (Fig. 41).

On *Krugiodendron ferreum* (Vahl) Urb. (Rhamnaceae). Species probably in common with Puerto Rico (under *M. thouiniae* Earle).

New record on the same host plant: Valle del Cibao, prov. Santiago, Santiago, Santiago, Hato del Jaque, in thickets, 26.XII.1930, coll. R. C. & E. L. E. (without number).

Distributed by CIFERRI (1938) under the binomial *M. thouiniae* Earle.

141. MELIOLA (Irenina) LAGERHEIMII Gaill., Gen. Mel., pag. 49 (1892).

On *Ilex montana* (Sw.) Griseb. (Aquifoliaceae), Valle del Cibao, prov. Santiago, Santiago, Hato del Yaque, 8.X.1929, coll. E. L. E. (*N° 3230*).

The spores are slightly shorter and narrower than in the type species. For a discussion on this species see under *Meliola ilicicola* Hansf.; see also CIFERRI (1933).

142. MELIOLA (Irenina) LAGUNCULARIAE Earle, Muhlenb., Vol. I, pag. 11 (1901). (Fig. 42).

On *Laguncularia racemosa* (L.) Gaertn. (Combretaceae). Only one record: Cordillera Central, prov. Samaná, Los Haitises, Boca del Infierno, 22.VI.1930, coll. E. L. E. (*N° 4583*).

Species quoted by CIFERRI (1938) on *Conocarpus erecta* L. (Combretaceae), so that the above noted host plant is new. Both specimens are identic, and agree well with the description, the species being distinct

from *M. nigra* Stev. living on *Laguncularia racemosa* also in Santo Domingo. An interantillean and Central American species, found on mangrove swamps.

143. MELIOLA LICTOREA Cif., Ann. Mycol., Vol. XXXVI, pag. 12 (1938). (Fig. 43).

On *Exostema sanctae-luciae* (Kentish) Y. Britten (Rubiaceae). Only one record of this endemic species. See CIFERRI (1938).

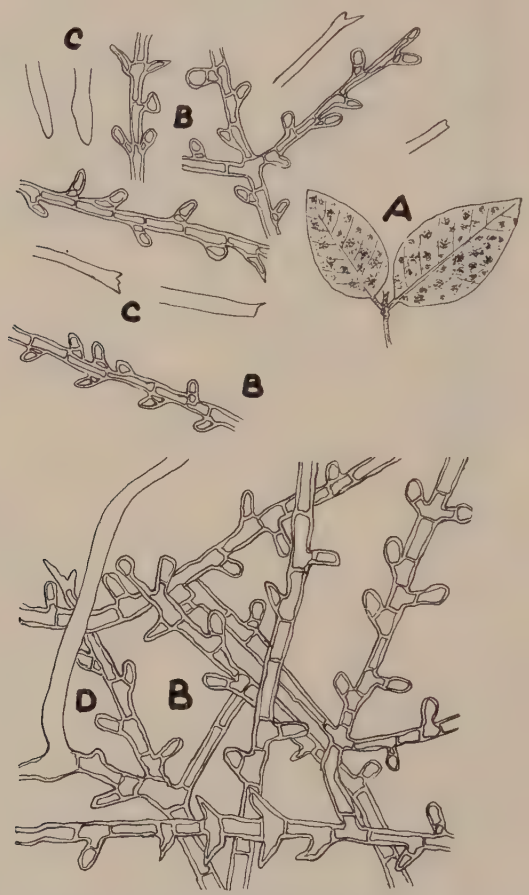

Fig. 41. *Meliola krugiodendri* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia *c*) Tip of the setae; *d*) Basal part of a setae.

144. ** MELIOLA LISIANTHI Stev. et Teh., Mycologia, Vol. XVIII, p. 15 (1926 var. **BISGOEPPERTIAE** Cif., n. var. (Fig. 44).

A typo recedit setis acutis vel obtusis, rarissime sub-dentatis, 300—450 u. longis; hyphopodiis capitatis oppositis, rarius unilateralibus, rarissime alternantibus, densissimis abundantisque uniformibus, cellula superiore elliptica vel ovoidea, 9—12 × 7—9, cellula inferiore evidenti, 2,5—4 longa; peritheciis minoribus. 180—200 diam.; sporis minoribus, 32—35 × 15—17.

HAB.: in pagina superiore foliorum *Bisgoeppertiae scandentis* (Spr.) Urb. (Gentianaceae), Peninsula de Samaná, prov. Samaná, Laguna, Los

Bañaderos Prietos, 200 m. circa, 28.V.1930, coll. E. L. E. (*N° 4219*). The type species, which formula is known on *Lisianthus* from British

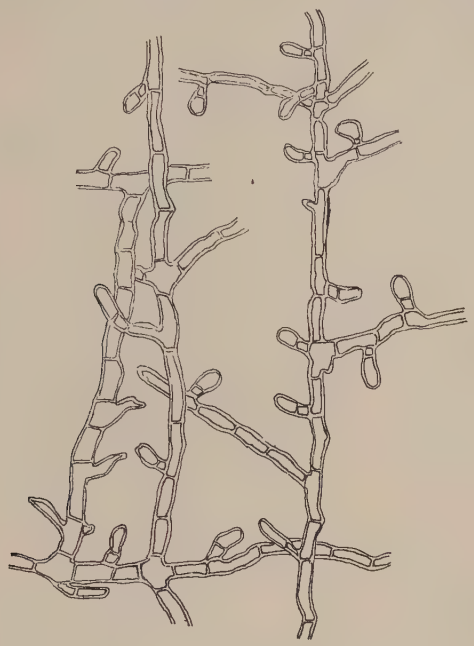

Fig. 42. *Meliola lagunculariae* Earle. Mycelium with hyphopodia.

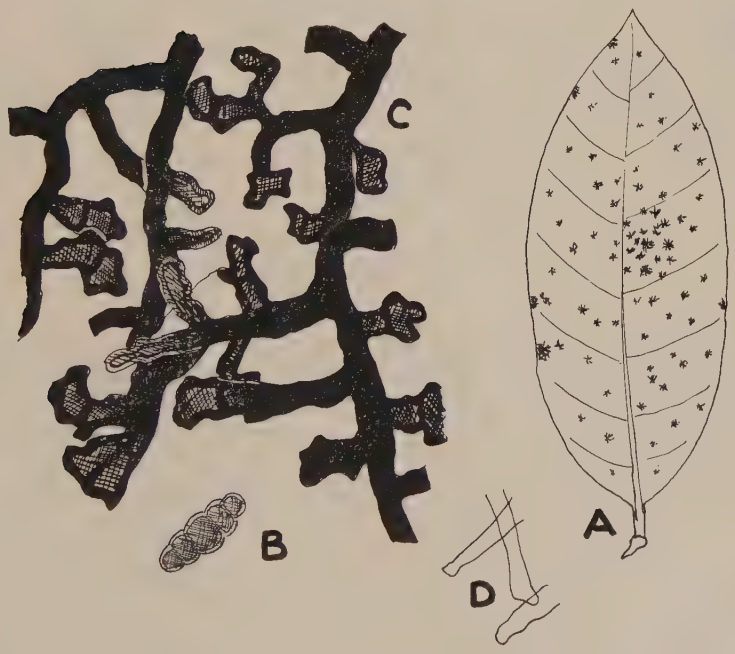

Fig. 43. *Meliola lictorea* Cif. *a*) Habitus of the fungus; *b*) Spores; *c*) Mycelium with free ends and hyphopodia; *d*) Tip of the setae.

Guiana and on *Chelonanthus* from Costa Rica, the formula being 3111. 2121, the formula of this variety corresponding to 3113.3222. Really, our specimen is quite distinct from *M. lisianthi*, but only a variety is made on account of the variability of the same species.

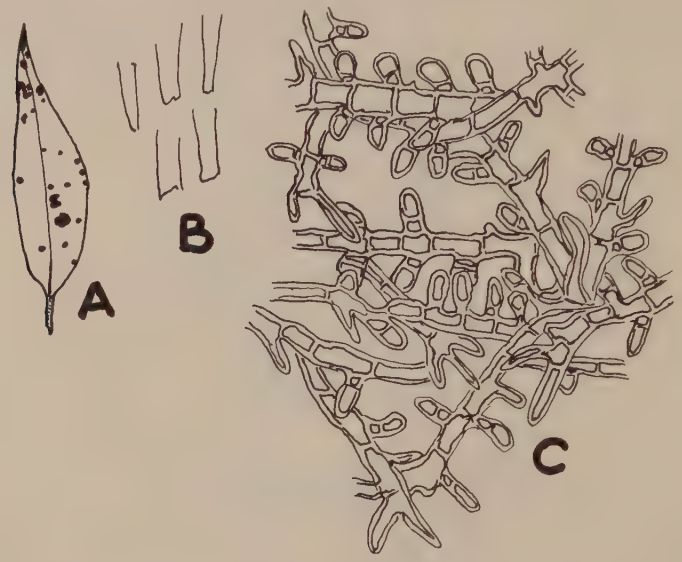

Fig. 44. *Meliola lisianthi* Stev. et Teh. var. *bisgoeppertiae* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia; *c*) Tips of the setae.

The colonies are very dense, almost crustose, scattered, single or, rarely, subconfluent, 1—2 mm. diam.; the mycelium is densely crooked with opposite, anastomized branches, densely septate; capitate hyphopodia very regular in size and shape, but with head cell elliptic or ovoid, never spheric; spores elliptic to cylindric, very narrowed at the septa, with rounded ends; other characteristics as in the diagnose.

Apparently the first Meliolinea found on the genus *Bisgoeppertia*.

145. * MELIOLA (Irenina) LONCHOCARPI Speg., An. Mus. Nac. Buenos Aires, Vol. XXXII, pag. 358 (1924).

On *Dimorphandra ekmanii* Urb. (Leguminosae). Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. E. L. E. (*N° 3291*).

A peculiar situation: *M. lonchocarpi* Speg. has been found, up to-now, in Argentine on *Lonchocarpus*, while the *Meliola* found on *Lonchocarpus* in Santo Domingo is the Central American *M. lonchocarpicola* Stev. The specimen on *Dimorphandra* agree well with the description, and this is the first record of a Meliolinea on this genus of host plant.

146. MELIOLA LONCHOCARPICOLA Stev., Ann. Mycol., Vol. XXVI, pag. 207 (1928) var. SANCTI-DOMINICI Cif., Ann. Mycol., Vol. XXXVI, pag. 12 (1938). (Fig. 45).

On *Lonchocarpus domingensis* (Pers.) P. DC. (Leguminosae). Only one record (*N° 2756*) of this endemic variety, which type species is known for Panama. See CIFERRI (1938).

147. MELIOLA (Irenina) LONGIPODA Gaill., Bull. Soc. Mycol. France, Vol. VIII, pag. 178 (1892). (Fig. 46).

Previously quoted by PETRAK and CIFERRI on *Cordia alliodora* (R. et P.) Cham. (Boraginaceae). New records: on *C. nitida* Vahl (idem.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 16.II. 1930, coll. E. L. E. (*N° 3228*); on *C. areolata* Urb. (id.), Cordillera Central, prov. La Vega, Jarabacoa, 600 m. ca., XI. 1929, coll. idem. (*N° 2636*); on *Tournefortia hirsutissima* L. (idem), Valle del Cibao, prov. Espaillat,

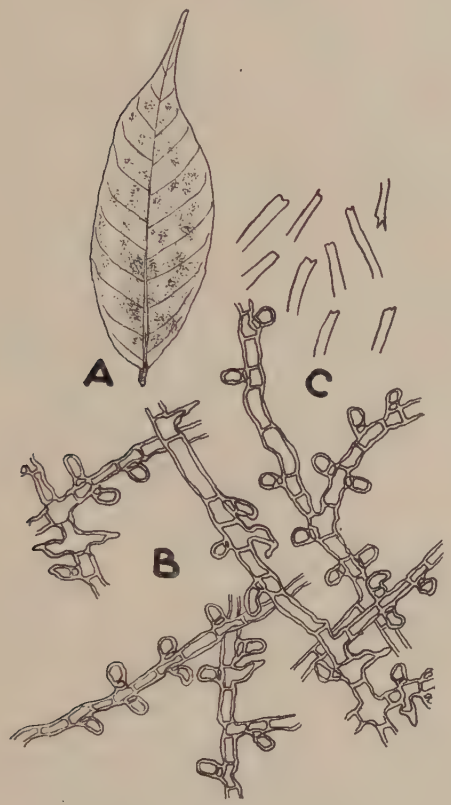

Fig. 45. *Meliola lonchocarpicola* Stev, var. *sancti-dominici* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia; *c*) Tips of the setae.

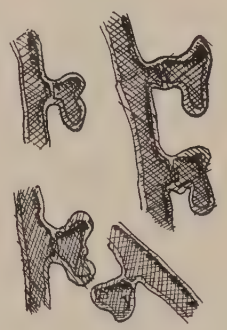

Fig. 46. *Meliola longipoda* Gaill. Hyphopodia.

Moca, Estación Nacional Agronomica, 17.II.1930, coll. idem (*N° 3041*); on *T. peruviana* Poir. (id.) Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929 coll. idem (*N° 2807*); on *Ehretia tinifolia* L. (idem.), Valle del Cibao, prov. Santiago, Santiago, Hato del Yaque, hillside, 2.X.1930, coll. idem (*N° 4584*).

A common neotropical species, ubiquitarious on members of the Boraginaceae family; but the species on *Citharexylon fruticosum* should be referred to *M.* (Irenina) *vilis* Syd. In the specimen on *Tournefortia hirsutissima* the spores are 40—43 by 18—20 and the perithecia 130—150 in diam., namely, smaller than the description; in the specimen on *T. peruviana* the capitate hyphopodia are very variable (as STEVENS observed in the material from Puerto Rico): the hyphopodia are shorter and very irregular in shape, varying from sub-sinuate to incise-sinuate, the

spores being 34—38 by 6—8 and the perithecia 50—100 in diam. The determination of the heavily parasitized specimen *N° 3228* is uncertain; also the specimen *N° 4584* is parasitized by *Helminthosporium* and other fungi. On *Cordia alliodora* the species has been quoted by PETRAK and CIFERRI (1930), STEVENS (1917, under *Irenina*) and TORO (1927, under *Irene*).

148. ** MELIOLA LONGISTIPITATA Stev., Ann. Mycol., Vol. XXVI, pag. 191 (1928) var. **MINOR** Cif., n. var.

Setis myceliaribus dimorphis; setis minoribus similaribus (180 longis), sed pro more pluridentatis, denticulis 7—9,5, rarius 12 longis; setis majoribus usque 1000 longis; hyphopodia capitata corto-stipitata, cellula basali 3—5 longa; sporis longioribus (52—56 × 16—19).

HAB.: in foliis *Costi cylindrici* Jacq. (Zingiberaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 300 ca., 3.III.1930, coll. E. L. E. (*N° 3309*).

Formula of the variety: 3132.5223; formula of the type species: 3132. 3224. The dimorphic setae are similar to those described on the type species, but the teeth of the shorter ones are not more than about 25 in length, and the larger setae are of about 1000 in lenght instead of 1700; capitate hyphopodia short-stipitate. The type species has been described on *Dimerocostus*, of the same family, in Panama. On *Costus* spp. are known *M. parasitica* Stev. (from Ecuador) and *M. costi* Stev. (from Panama), both well distinct from our variety. A safeguard must be made in order to the fact that the specimen is overgrown by fungi, including imperfect sooty-molds.

149. * MELIOLA LUCUMAE Stev., Ill. Biol. Mon., Vol. II, pag. 49 (1916).

On *Achras zapota* L. (= *Lucuma mammosa* A. DC.; = *Calocarpum mammosum* Pierre) (Sapotaceae). Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 15.III.1930, coll. E. L. E. & R. C. (*N° 3271*).

On the same host plant has been described *M. domingensis* Cif., a well distinct species (see). This specimen agree well with the STEVENS' description and figure, with exception of the length of the capitate hyphopodia (a typographical slip?), the head cells being 17 in lenght and the stalk cell 3 in length. In our specimen the capitate hyphopodia are 15—30 apart, 18—22 long at all, very rarely more; the setae, few in number, are 290—365 long, as a rule obtuse, rarely subacute, as a rule no more than 330, with the perithecia also smaller and the spores of 37—41 by 10—12. See CIFERRI and FRAGOSO (1927, under *Irene*), and CIFERRI (1929, under *Irenina*).

Species new to Santo Domingo, previously found in Argentina and Puerto Rico. The formula according the description is: 3111.4223; the formula deduced from the Dominican specimen is: 3111.4212.

150. MELIOLA MACROPODA Syd., Ann. Mycol., Vol. XXVI, pag. 245 (1928).

On *Zanthoxylum martinicense* (Lam.) DC. (= *Fagara martinicense* Lam.) (Rutaceae).

Only one record; see CIFERRI (1931).

151. MELIOLA MAGNOLIAE Stev. Ill. Biol., Vol. II, pag. 55 (1916) var. ILLICI Cif., Ann. Mycol., Vol. XXXI, pag. 147 (1933). (Fig. 47).

On *Illicium parviflorum* Michx. (Magnoliaceae). New record of this endemic variety: Cordillera Central, prov. Santo Domingo, Villa Altagracia,

Loma Marián Chicle m. 700 ca., 6.I.1930, coll. E. L. E. (*N° 2846*). See CIFERRI (1933).

152. MELIOLA MALACOTRICHA Speg., An. Soc. Cient. Argentina, Vol. XXVI, pag. 59 (1888). (Fig. 48).

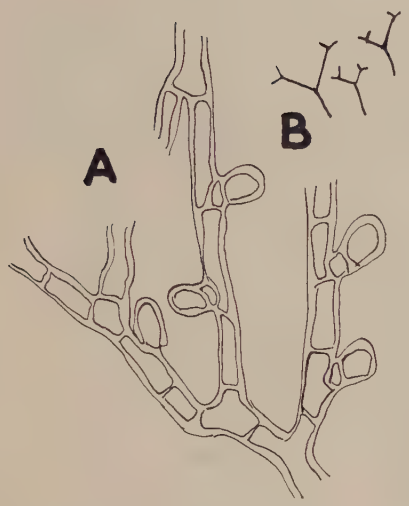

Fig. 47. *Meliola magnoliae* Stev. var *illicii* Cif. *a*) Mycelium with hyphopodia; *b*) Tip of the setae.

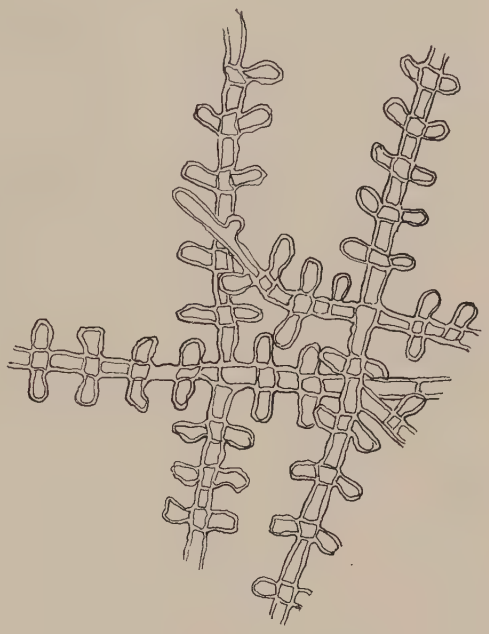

Fig. 48. *Meliola malacotricha* Earle. Mycelium with hyphopodia.

On *Ipomoea rubra* (Vahl) Millsp. (Convolvulaceae), Valle de San Juan, prov. Azua, San Juan de la Maguana, VIII.1929, col. R. C. (*N° 2861*). On *Operculina populifolia* Hall. f. (idem), Peninsula de Samaná, prov. Samaná, Samaná, Laguna, ca. 350 m., 29.V.1930, coll. E. L. E. (*N° 4549*).

This intertropical species is not uncommon in Santo Domingo, but indicated here for the first time. The specimen *N° 2861* is imperfectly developed; the capitate hyphopodia are small, regularly obovate or cylindric, allways opposite. It is found in the same leaf with *M. clavulata* Wint. In the specimen *N° 4549* the capitate hyphopodia are very regularly disposed, allways opposite, very rarely unilateral, geometrically arranged on the regularly branched mycelium; the head cell is elliptic to cylindric, the setae few, as a rule localized near and around the perithecia, so that it appears similar to a fungus of the subgenus *Irenopsis*; setae as a rule obtuse, very rarely subacute, less than 175 long; perithecia 100—120 diam., spores 40—44 by 16—18, slightly narrowed at the septa. The formula, according the specimen at hand, is 3112.4221, while the formula of the species is 3112.3231. It is different from the var. *major* Beeli: of the same species (3112.4222) for the shape of the end cells of spores, and the not twined, nor with an irregular mycelium. The same specimen agree well with *M. merremiae* Rehm, but this species is referred by STEVENS to *M. malacotricha*.

153. MELIOLA MANCA Ell. et Mart., Amer. Nat., Vol. XVII, pag. 1284 (1883).

On *Myrica cerifera* L. (Myricaceae), Peninsula de Samaná, prov. Samaná, Sabana de la Mar, edge of savanna, coll. E. L. E. 11.VII.1930 (without number); on the same host plant: Cordillera Septentrional, prov. Puerto Plata, Cupey, coll. idem. 17.III.1930 (*N° 3317*).

This intertropical, cosmopolitan species agree well with the description; see CIFERRI (1931).

154. MELIOLA MANGIFERAE Earle, Bull. New York Bot. Gard., Vol. III, pag. 307 (1905).

On *Mangifera indica* L. (Anacardiaceae). The species has been previously quoted for the Dominican Republic by CIFERRI (1927, 1931), FRAGOSO and CIFERRI (1927, 1928), TORO (1927) and PETRAK and CIFERRI (1930). This intertropical, widely diffused species is one of the commonest in Santo Domingo as, e.g., Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 27.II.1930, coll. E. L. E. (*N° 3112*); ibid., 15.III.1930 (*N° 3270*); etc.

Fig. 49. *Meliola mappiae* Cif. Habitus of the fungus.

155. MELIOLA (Irenina) MAPPIAE Cif., Ann. Mycol., Vol. XXIX, pag. 288 (1931). (Fig. 49).

On *Mappia racemosa* Jacq. (Icacinaceae). An endemic species, collected only once; see CIFERRI (1931).

156. *MELIOLA MARANTAE Stev. et Dow., in Stev., Ann. Mycol., Vol. XXVI, pag. 250 (1928).

On *Maranta arundinacea* L. cult. (Marantaceae), prov. La Vega, road from La Vega to Bonao, 6. V. 1927, coll. R. C. (without number).

Determined on a sterile specimen overgrown by fungi, and first record for the species outside the British Guiana. Colonies amphigenous, from 2 to 12 mm. in diam., irregularly distributed, from single and scattered to

confluent, black, more or less velvety, irregular in shape; without setae, perithecia and spores; mycelic branches opposite, septate, light-brown in color, forming an irregular network, with opposite branches; capitate hyphopodia as a rule alternate, with an ovate or cylindroid head cell, entire, simple, 8—12 by 6—8, with an evident basal cell, short, 4—6,5 in length, 3—4 thick; mucronate hyphopodia very few, bottle-shaped, opposite or alternate or unilateral, 8—12 long, 4—6 thick at the base, and 2—3,5 at the acutate end.

157. *MELIOLA (Irenina) MARCGRAVIAE Teh., Botan. Gaz., Vol. LXVII, pag. 506 (1919).

On *Marcgravia rectiflora* Tr. et Pl. (Marcgraviaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. E. L. E. (*N° 3222*).

A neotropical species, not previously found in Santo Domingo. The characteristic of the specimen at hand, agree well with the description; see also under the *N° 79*.

158. *MELIOLA MATAYBAE Stev., Ann. Mycol. Vol. XXVI, pag. 228 (1928).

On *Matayba domingensis* (DC.) Radlk. (Sapindaceae), Valle del Cibao, prov. Pacificador, San Francisco de Macoris, II.1926, coll. R. C. (without number).

First record of the species outside Costa Rica. Colonies black, up to 3 mm. in diam., almost epiphyllous, opac, scattered and, as a rule, single; mycelium dull-brown, septate, radiate-branched, with mycelial segments at right angle, 3—6 in thickness; capitate hyphopodia as a rule opposite, rarely unilateral, never alternate, slightly anthrorse, dense up to contiguous, composed of a conical or cylindroid head cell, 10—12 by 5—8, and a short, little evident basal cell, 3—4 in height, 4—6 in thickness; mucronate hyphopodia scattered and scarce, bottle-shaped, 8—12 in length, 4—6 at the slightly inflated base, 2,5—4 thick at the sub-acute tip; without perithecial setae; only a few mycelial setae, grouped, as a rule, around the perithecium, simple, obtuse or sub-obtuse, opac, black, almost flexuose, 200—300 in length; perithecia globose more or less depressed, smooth, 120—250 in diam., borne on a radiate or alveolar disk; asci not observed; spores brown to dull-brown, 4-septate, ovoidal or ellipsoidal, with rounded to subacute ends, slightly narrowed at the septa, 35—40 by 13—17.

159. **MELIOLA MATAYBAE Stev., Ann. Mycol., Vol. XXVI, pag. 228 (1928) var. **LONGIARISTATA** Cif., n. var.

A typo recedit setis longioribus (usque 300—400 longis), peritheciis minoribus (100 diam. vel minus).

HAB.: in foliis *Cupaniae americanae* L. (Sapindaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2764*).

The type species in known only in Costa Rica on *Matayba*; its formula is: 3112.3221, while the formula of the variety is: 3112.3212.

It is noteworthy that many Meliolineae are able to grow on *Cupania*; in Puerto Rico are found species differing from the two species and one variety found in Santo Domingo.

160. MELIOLA MAYAGUESIANA Stev., Ill. Biol. Mon., Vol. II, pag. 32 (1916).

On *Palicourea barbinervis* P. DC. (Rubiaceae), Cordillera Central, prov. Santo Domingo, road to Ciudad Trujillo, near La Cumbre, ca. 300 m.,

3.III.1930, coll. E. L. E. & R. C. (*N° 3244*). New record: on the same host plant, Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930 coll. E. L. E. (*N° ?3090*). On *Palicourea crocea* (Sw.) R. et Sch., Valle del Cibao, prov. Pacificador, Cotuý, edge of forest, 18. IV.1930, coll. E. L. E. (*N° 4178*).

The specimen *N° ?3090* is badly developed, and intensively overgrown by fungi, so that mycelial and perithecial seate are lacking. The fungus on the specimen *N° 4178* agree well with the description. See CIFERRI (1928, 1938).

161. **MELIOLA MAYAGUESIANA Nev., Ill. Biol. Mon., Vol. II, pag. 32 (1916) var. **DOMINICANA** Cif., n. var.

A typo recedit coloniis 1—3 mm. diam., nigris, sub-indefinitis, singulis; setis perithecialibus numerosissimis, minoribus (300 vel minus longis); peritheciis majoribus (300 vel minus in dam.); sporis minoribus (25—30 longis).

HAB.: in pagina superiore foliorum *Psychotriae revolutae* P. DC. (Rubiaceae), Llano Costero, prov. Santo Domingo, Guerra, Sabana de Guabatico, VIII.1929, coll. R. C. (*N° 2712*).

Formula of the variety: 3411.2231; formula of the type species: 3411. 5123. The variety, evidently of the cycle of *M. mayaguasiana*, in also remarkable for the abundance of the perithecial setae, covering completely or almost completely the perithecium.

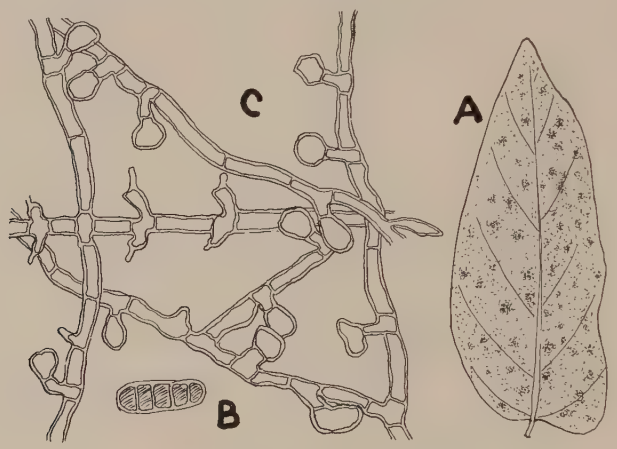

Fig. 50. *Meliola meibomiaecola* Cif. var. *mucunae* Cif. *a*) Habitus of the fungus; *b*) Spores; *c*) Mycelium with hyphopodia.

162. *MELIOLA MAYEPEAE Stev., Ill. Biol. Mon., Vol. II, pag. 48 (1916).

On *Linociera ligustrina* Sw. (= *Mayepea ligustrina* O. Kuntze) (Oleaceae), Valle del Cibao, prov. Santiago, Santiago, edge of the forest, road to Puerto Plata, 7.VII.1929, coll. R. C. (without number).

First record outside Puerto Rico. Our specimen agree well with the description, this species being well distinct from *M. hispaniolensis* Cif. (see).

163. **MELIOLA MEIBOMIAECOLA** Cif., n. nom.

Syn. *Irenina meibomiae* Stev., Ann. Mycol., Vol. XXV, pag. 454 (1927) non *Meliola meibomiae* Stev. et Teh., Mycol., Vol. XVIII, pag. 7 (1926). var. **MUCUNAE** Cif., n. var. (Fig. 50).

A typo recedit mycelio segmentis quasi rectis constituto; hyphopodiis capitatis paucis, 25—29 × 14—18, cellula apicali plus vel minus sphaerica, majore, (24—28 diam.) non infrequenter etiam sub-lobata, cellula basali longiore (10—12 longa); hyphopodiis mucronatis semper oppositis, ampulliformibus, irregularibus, longioribus, 22—26 × 8—11; peritheciis 145—170 diam.; sporis cylindricis, ad septa non vel parum constrictis, 39—42 × 15—18.

HAB.: in foliis *Mucunae sloanei* Fawc. et Rendle (Leguminosae), Peninsula de Samaná, Samaná, Boca de Río San Juan, 16.V.1930, coll. E. L. E. (sine numero).

The new specific name has been established in order to avoid the duplication with the valid binomial *M. meibomiae* Stev. et Teh.

The formula of the new variety is: 3101.4220; the formula ot the type species (found on *Meibomia* in Panama) is: 3101.3220. This variety is but a little different from the type species.

164. ****MELIOLA MELANOCHAETA** Cif., n. sp.

Coloniis paucis, nigris, sub-velutinis, rotundatis, diffusis vel sub-diffusis, 3—8 mm. diam.; mycelio reticulato-intertexto, hyphopodiis brunneis, septatis, angulo recto ramificatis, 3,5—5,5 crassis; hyphopodiis capitatis ellipticis ovatisve, oppositis, distinctis, cellula superiore usque 22—9, pro more 14—16 × 12—14, cellula basali plus minus distincta, 2—4 longa; hyphopodiis mucronatis paucis, irregularibus, ampullaceis; setis myceliaribus rectis vel curvulatis, numerosis, nigris, opacis, 160—250 × 4—7; setis perithecialibus aequalibus; perithecia nigra, depressa, scabra, dein cartilaginea, 120—140 diam.; ascis 2—4-sporis; sporis 4—septatis, brunneo-fuscis, ad septa leviter constrictis, cylindraceis vel ellipticis, utrimque rotundato-obtusis 32—34 × 13—15.

Fig. 51. *Meliola melastomacearum.* Mycelium with hyphopodia.

HAB.: in pagina inferiore foliorum *Casearíae arboreae* (L. C. Rich.) Urb. (Flacourtiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, 300 m. ca., 3.III.1930, coll. E. L. E. (*N° 3215*).

Formula: 3411.3231. Distinct from the other *Meliolae* on *Casearia* spp. by the presence of perithecial setae; see under *M. casearíae* Petr. et Cif. The colonies are few and scattered, black, almost velvety, circular or orbicular, more or less diffused, 3—8 mm. diam., mycelium network-crooked, brown, septate, with branches ramified at a straight angle, 3,5—5,5 thick; capitate hyphopodia elliptic or ovate, opposite, scattered, with the head cell up to 22 by 9 (as a rule 14—16 by 12—14), entire, regular, stalk cell more or less distinct, short, not more than 2—4 in length; hyphopodia mucronata few in number, irregular, bottle-shaped, quite variable; mycelic setae straight or a little curved, abundant, black, opac, sub-rigid, 160—250

long, 4—7 thick, as in the perithecial setae; perithecia black, compress, rough, almost cartilagineous, 120—140 in diam.; asci 2—4-spored; spores 4-septate, dull-brown, cylindric or ellipsoid, with obtuse or rounded ends, slightly narrowed at the septa, 32—34 by 13—15.

165. MELIOLA (Irenina) MELASTOMACEARUM Speg., Bol. Acad. Nac. Ci. Cordoba, Vol. XI, pag. 495 (1889). (Fig. 51).

Previously found on *Heterotrichum umbellatum* (Mill.) Urb. (Melastomataceae) and *Clidemia hirta* (L.) D. Don (idem), on the last host plant by Toro and published under the binomial *Irene melastomacearum* (Speg.) Toro.

New records: on *Calycogonium hispidulum* Cogn. (id.), without locality and data, collected probably by E. L. E. (*N° 3303*). On *Clidemia strigilosa* (Sw.) P. DC. (id.), Cordillera Central, prov. Azua, San Juan de la Maguana, Arroyo Manacle, m. 700 ca., VIII.1929, coll. R. C. (without number). On *Miconia racemosa* (Aubl. P.DC. (id.), as above (without number); on the same host plant: Cordillera Central, prov. Santo Domingo, La Cumbre, m. 273, 3.III.1930, coll. idem (*N° ?3243*). On *M. guianensis* (Aubl.) Cogn. (id.), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 275 ca., 3.III.1930, coll. idem (*N° 3153*). On *M. ottoschulzii* Urb. (id.), as above, m. 250, 12.XII.1929, coll. idem (*N° 2745*). On *Nepsera aquatica* Aubl. (id.), as above, m. 275, 3.III.1930, coll. idem (*N° 3255*). On *Miconia laevigata* (L.) P.DC. (idem) (Valle del Cibao, prov. Pacificador, Cotuý, edge of forest, 18.IV.1930 [without number]). This specimen is associated with an undeveloped Microthyriaceous fungus, and with a number of peculiar Hyphomycetes, to be described elsewhere.

Is notable the uniformity of the microscopical characteristic of the species on members of the Melastomataceae family above quoted, if the specimens are not overgrown by fungi. But really, the *Meliola* is frequently parasitized by a number of fungi, so that the characteristics of the colonies are variable, and the specific determination is made on the base of the microscopical habitus of the fungus. This species has been found for the first time on a species of the genus *Calycogonium*, and, probably, of *Nepsera*.

See Toro (1927, under *Irene*); Stevens (1927, under *Irenina*), Ciferri (1931).

166. MELIOLA MERRILLII H. et P. Syd., Philipp. Journ. Sc., C. Bot., Vol. VIII, pag. 479 (1913).

On *Cissus sycioides* L. (Vitaceae). Quoted by Petrak and Ciferri and Toro. New records: on the same host plant (id.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, without year, coll. E. L. E. (*N° 3085*); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, La Caleta, m. 10 ca., 10.II.1930 (*N° 3098; N° 3133*).

An intertropical species, common in Santo Domingo on this host plant. See Toro (1927), Petrak and Ciferri (1930), and Ciferri (1933).

167. MELIOLA (Irenopsis) MICONIAE Stev., Ill. Biol. Mon., Vol. II, pag. 498 (1917).

On *Miconia laevigata* (L.) P.DC. (Melastomataceae), and *Miconia* sp., as quoted by Ciferri and Fragoso (1928, under *Irenopsis*) and Toro (1927).

168. **MELIOLA (Irenopsis) MICONIAEICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 23 (1916) var. **HENRIETELLAE** Cit., n. var. (Fig. 52).

A specie differt coloniis parvis, punctiformibus usque indefinitis, majoribus; setis longioribus (180—290) crassioribusque (9—11), acutis usque subacutis, paucis; hyphopodiis capitatis 40—75 distantibus; mycelio crassiore, 6—10 crasso.

HAB.: in foliis *Henrietellae fascicularis* (Sw.) Triena (Melastomataceae), Cordillera Central, prov. Seybo, El Jovero, ad viam Sabana del Hato, 22.VII.1930, leg. E.L.E. (*N° 4569*).

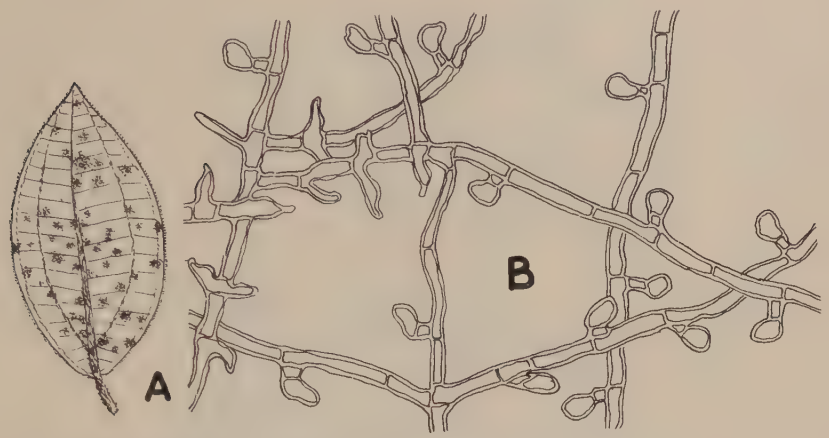

Fig. 52. *Meliola miconiaeicola* Stev. var. *henrietellae* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

Colonies black, small, from punctiform and quite well delimited (1—1,5 mm. in diam.) to indefinite, blackish, undelimitate, frequently confluent 2—3 mm. diam.; setae longer (180—290 instead of 30—85) and thicker (9—11 instead of 7), acute to sub-acute, light colored at the tip, in number of 5—10 for each perithecium; capitate hyphopodia 40—75 apart; mycelium 6—10 thick (instead of 6).

This variety agree quite well with the species, being, in a certain way, intermediary between *M. miconiaeicola* and *M. miconiae*.

169.*MELIOLA MIKANIAE Gaill., Bull. Soc. Myc. France, Vol. VIII, pag. 187 (1892). (Fig. 53).

On *Mikania scandens* (L.) Willd. (Compositae), Cordillera Central, prov. Santo Domingo, La Cumbre, 275 m., 3.III.1930, coll. ? (*N° 3216*).

The specimen at hand differs from the description in having setae not only branched, but branched to dentate, entire and geniculate, so that the formula of the species, according our specimen, instead of 3141.4331, is 3131.4223.

The spores are slightly smaller (38—42 by 14—19); perithecia smaller (110—130 in diam.), setae longer (575—250 by 9—12). The capitate hyphopodia are very regularly cylindric or cylindric-acuminate, to conic-truncate, with rounded tip, but never lobate, 20—26 by 11—13, basal cell 3; hyphopodia mucronata present but scarce, opposite, curved, irregularly bottle-shaped in form, 19—22 in lenght, 7 diam. at the base 3,5—4,5 at the free end.

This is the first record for Santo Domingo of this american species.

170. MELIOLA MOELLERIANA Wint., Hedwigia, Vol. XXV, pag. 98 (1886).

On *Sida urens* L. (Malvaceae) as quoted by Toro. New records: on the

same host plant, Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 2735*). On *S. acuta* Burm. (Malvaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, in ruderatis, 14.XII.1929, coll. idem (*N° 3159*). On *Pavonia spicata* Cav. (Malvaceae), Cordillera Central, prov. Seybo, El Jovero, moist places, 26.VII.1930, coll. idem (*N° 4185*). On *Hibiscus brasiliensis* L. (without label note).

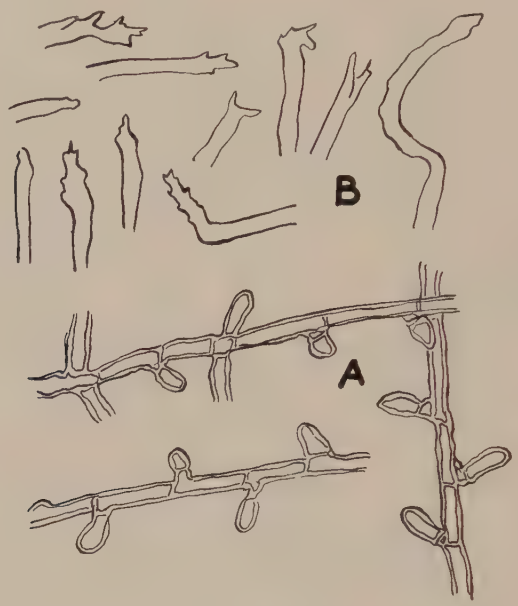

Fig. 53. *Meliola mikaniae* Gaill. *a*) Mycelium with hyphopodia; *b*) Tips of the setae.

The specimen *N° 4185* is of doubtful determination: the characteristics of the mycelium and hyphopodia agree well with the species, but the fungus is immature, and associate to an immature Microthyriacea. In the specimen on *Hibiscus brasiliensis* the setae are only perithecial; scarce in number, obtuse at the tip and not well developed (70—145 by 8—11); the spores are slightly smaller: as a rule 37—40 by 13—15. A cosmopolitan species.

171. *MELIOLA (Irenopsis) MOELLERIANA Wint., Hedwigia, Vol. XXV, pag. 98 (1886) var. SIDICOLA (Stev. et Teh.) Stev., Ann. Mycol., Vol. XXV, pag. 438 (1927).

On *Sida hederifolia* Cav. (Malvaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 17.II.1930, coll. R. C. (*N° 3261*).

The perithecial setae are so scarce, that this species would be easily classified as a glabrous *Meliola* (*Irenina*); most of the perithecia are glabrous at all; other characteristics agree well with the description of the variety. Hitherto known only from British Guiana.

172. MELIOLA MONENSIS Stev., Ill. Biol. Mon., Vol. II, pag. 38 (1916).

On *Amyris diatrypa* Spr. (Rutaceae). Quoted by ourselves (1938). In common with Mona island (Puerto Rico).

173. ****MELIOLA** (Irenina) **MONILIPES** Cif., n. sp. (Fig. 53a).

Coloniis fuscis usque rufo-brunneis, saepe indistinctis, effusis, parte

periphaerica fusca, centrali minus colorata, orbicularibus, isolatis, 3 mm. diam. (coloniis parasitatis nigris, singulis, densis, opacis, 1—2 mm. diam.); mycelio ex hyphis parce ramosis, saepe oppositis, plus vel minus regularibus, brunneis, septatis, 5—6 crassis constituto; hyphopodia capitata sessilia, elliptica aut ovata, saepe parte basali secundo diametro longiore

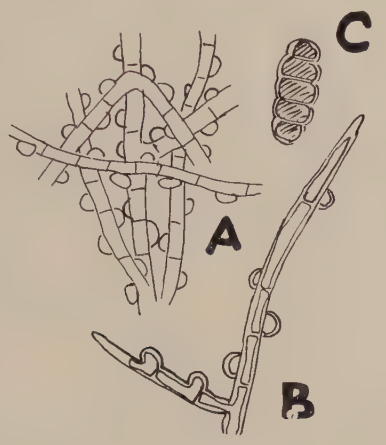

Fig. 53a. *Meliola monilipes* Cif. *a*) General aspect of the mycelium with hyphopodia; *b*) Particular of a segment of the mycelium with hyphopodia; *c*) Spore.

disposita, alternantia vel unilateralia (vel rarissime opposita?); hyphopodiis mucronatis non visis; setis myceliaribus perithecialibusque carentibus; peritheciis nigris, paucis, depressis, globosis, 100—140 diam.; ascis non visis; sporis ellipticis vel ovoideis, apicibus rotundatis, brunneolis, 4-septatis, ad septa leniter constrictis, 45—49 × 18—20.

HAB.: in pagina superiore foliorum *Guazumae ulmifoliae* Law. (Sterculiaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 16.II.1930, coll. R. C. (*N° 3094, 3095*) (typus); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, Los Alcarrizos, 11.II.1930, coll. id. (*N° 3094*).

Formula: 3101.4220. This glabrous *Meliola* is easily distinguished for the primitivity of the morphological structure, highly simplified. It is the first glabrous *Meliola* found on members of the Sterculiaceae family, as well as the first Meliolinea found in the genus *Guazuma*. The specimen *N° 3094* is sterile, but easily determined for the shape and distribution of the capitate hyphopodia.

174. ****MELIOLA** (Eumeliola) **MONOPLA** Cif., n. sp. (Fig. 54).

Coloniis praecipue epiphyllis, nigris, plus vel minus crustosis, subradiatis et sub-halonatis, rotundatis vel orbicularibus, singulis 0,5—3,5 mm. diam.; mycelio flavo-brunneo usque brunneo-fusco, ex irregulariter radiatis hyphis composito, ramoso, 6,5—8,5 crasso; hyphopodiis capitatis mediocriter abundantibus, brunneis usque brunneo-fuscis, pro more alternantibus usque unilateralibus, rarius oppositis, 16—20 longis, cellula apicali globosa, ovoidea vel ellipsoidea, recta vel curvula, 10—15 diam. vel 12—17 × 11—15, cellula basali abbreviata vel mediocri, 3,5—7 longa; hyphopodia mucronata pauca, irregulariter ampulliformia, opposita vel

non, cum hyphopodiis capitatis aggregata, base inflata, apice acutata, 13—18 longa, 5—7 crassa usque 2—3; setis myceliaribus nigris, apicibus brunneis, homogeneis, apicibus truncatis obtusisque usque sub-acutatis acutibusque, non rarius 2—3-septatis vel 2—3-brevissime ramosis (ramulis 8—12 longis), 145—300 elongatis, 6—10 crassis; sine setis perithe-

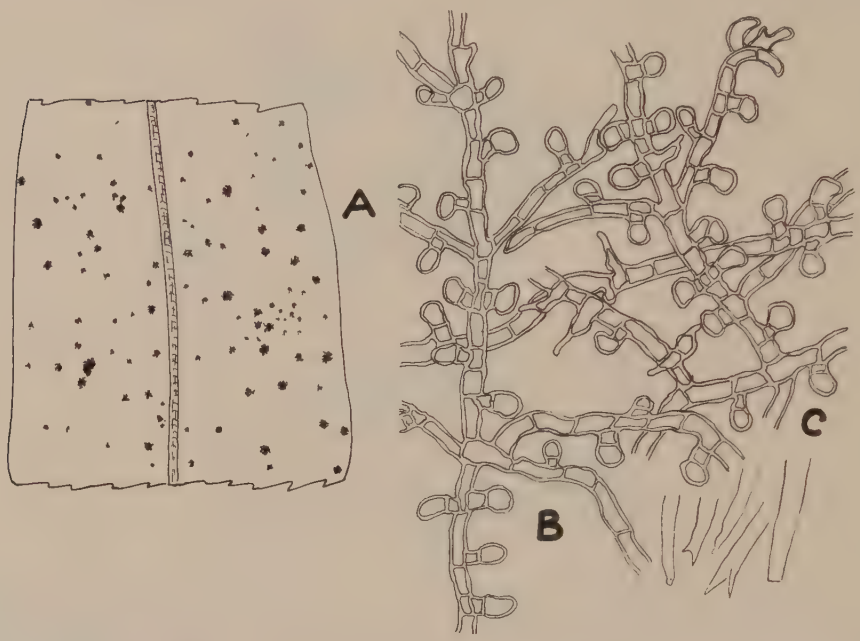

Fig. 54. *Meliola monopla* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia; *c*) Tips of the setae.

cialibus; peritheciis nigris, sparsis vel sub-aggregatis, sphaericis, quasi levibus, irregulariter circumscriptis, 175—225 diam.; ascis non visis; sporis dilute brunneis vel flavidulis usque brunneo-fuscis, regulariter cylindraceis usque ellipsoideis, apicibus rotundatis, 4-septatis, ad septa bene constrictis, 36—40 × 13—15.

HAB.: in foliis *Alpiniae aromaticae* Aubl. (= *Renealmiae occidentalis* Sweet) (Zingiberaceae), Península de Samaná, prov. Samaná, Samaná, Sánchez, old clearing, 300 m., 30.IV.1930, leg. E. L. E. (*N° 4192*).

Formula: $31\frac{1}{4}$ 3.3221. Colonies found chiefly on the upper surface of the leaf, black, crustose to sub-crustose, almost radiate, not rarely surrounded by a light-yellow, not easily distinguished halo, rounded to orbicular, 0,5—3,5 mm. diam., scattered, single, rarely near one to another; mycelium yellowish-brown to dull-brown, composed of irregularly to radiate hyphae, plurimous branched, 6,5—8,5 thick; capitate hyphopodia quite abundant to unilateral, more rarely opposite, head cell globose to spheroid, ovoid or ellipsoid, straight or curved, 10—15 diam., or 12—17 by 11—15, stalk cell short or of medium size, 3,5—7 long, mucronate hyphopodia very scarce, irregularly bottle-shaped, opposite or not, joint to the capitate one, inflated at the base, narrowed at the tip, 13—18 long, 5—7 thick at the base, 2—3 or less at the tip; mycelic setae quite abundant, black, with a brown tip, quite uniform and homogeneous (never biform), with a

truncate, obtuse or sub-acute to acute tip, not rarely 2-3-dentate or slightly branched, with 2 or 3 very short branches, not more than 8—12 long; setae long 145—300 at all, 6—10 thick; perithecial setae absent, though the mycelial setae under and around the perithecium are simulating perithecial setae; perithecia black, sparse to sub-aggregate, spheric, apparently smooth, with an irregular border, 175—226 in diam.; asci not seen; spores light-brown to dull-brown, from regularly cylindric to ellipsoid, with rouded ends, 4-septate, distinctly narrowed at the septa, 36—40 by 13—15.

This specie is similar, in a general way, to *M. longistipitata* Stev. (found on *Dimerocostus*, of the same family, in Panama, which formula is: 3132. 3224), but it is clearly distinct for the monotypic setae, the opposite and alternate, capitate hyphopodia, and other characteristics.

175. MELIOLA MOURIRIAE Cif., Ann. Mycol., Vol. XXIX, pag. 284 (1931). (Fig. 55).

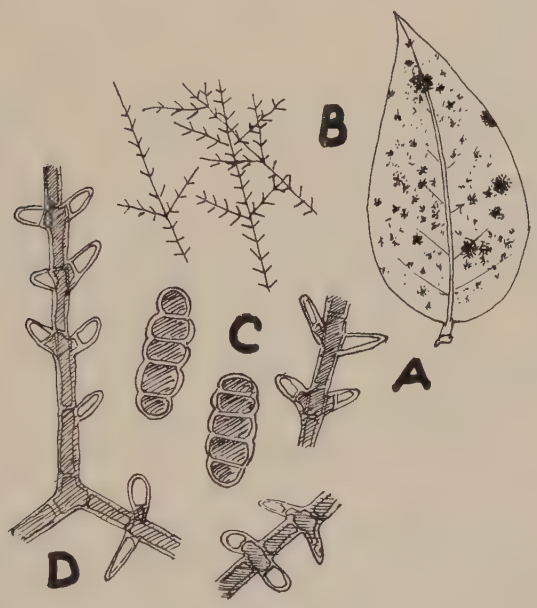

Fig. 55. *Meliola mouririae* Cif. *a*) Habitus of the fungus; *b*) General aspect of the mycelium; *c*) Spores; *d*) Mycelium with hyphopodia.

On *Mouriria domingensis* (Tuss.) Spach. (Melastomataceae). Previously quoted by ourselves. New record: on *Mouriria* sp. (idem), Cordillera Central, prov. Santiago, San José de las Matas, 11.IV.1930, coll. E. L. E. (*N° 4585*).

The new specimen *N° 4585* agree well with the type specimen (*N° 3306*), but the setae are shorter (up to 500), and frequently localized around or at the perithecia, but really growing on the radiate disk. The setae near the perithecium are shorter (70—225) than the true mycelic setae. See CIFERRI (1931).

176. MELIOLA (Irenina) MYRIOPODA Cif., Ann. Myc., Vol. XXXVI, pag. 13 (1938). (Fig. 56).

On *Wallenia laurifolia* Sw. (Mysinaceae). New records: Valle del Cibao,

prov. Espaillat, Moca, Estación Nacional Agronomica, 16.VI.1930, coll. R. C. (*N° ?3346*) (published as *M. „miriopoda"*).

An interesting, well characterized species, distributed by ourselves; see CIFERRI (1938). Endemic.

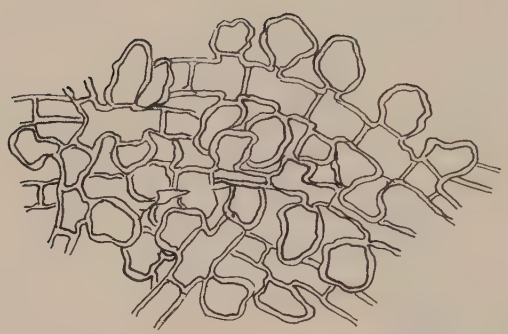

Fig. 56. *Meliola myriopoda* Cif. Mycelium with hyphopodia.

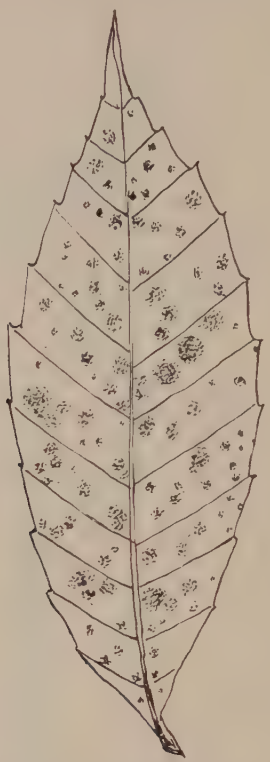

Fig. 57. *Meliola obscura* (Stev.) Cif. Habitus of the fungus.

177. MELIOLA NIESSLEANA Wint., Hedwigia, Vol. XXIV, pag. 260 (1835).

On *Vaccinium cubense* (A. Rich.) Griseb. (Ericaceae). Previously quoted only once for Santo Domingo by ourselves (1931). The lenght of the setae are quite variable.

178. MELIOLA NIGRA Stev., Ill. Biol. Mon., Vol. II, pag. 37 (1916).

On *Laguncularia racemosa* (L.) Gaertn. (Combretaceae). New records: on the same host plant, Llano Costero, prov. Santo Domingo, Ciudad Trujillo, shore of Río Ozama, 14.XII.1929, coll. R. C. (*N° 2793* and *2794*). On *Bucida buceras* L. (id.), Cordillera Septentrional, prov. Puerto Plata, Sosúa, 20.III.1930, coll. E. L. E. (*N° 3335*).

The specimen on *Bucida* agree well with the specimen on *Laguncularia*, and both are coincident with the description of this species, previously found in Puerto Rico. See CIFERRI (1933).

179. MELIOLA (Irenina) OBESA Speg., Anal. Soc. Ci. Argent., Vol. XVIII, pag. 264 (1889).

On *Fagara pterota* L. (= *Zanthoxylum fagara* L.) (Rutaceae), as quoted by TORO (1927) and by PETRAK and CIFERRI.

180. ***MELIOLA** (Irenina) **OBSCURA** (Stev.) Cif., n. comb. (Fig. 57).

Syn.: *Irenina obscura* Stev., Ann. Mycol., Vol. XXV, pag. 454 (1927). On *Doliocarpus* sp. (prob. *D. rolandri* Gmel.) (Dilleniaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, in forest, m. 250 ca., 14.XII. 1929, coll. E. L. E. (*N° 2744*). On the same host plant (*D. rolandri*), Cordillera Central, prov. Samaná, Sabana de la Mar, El Valle, 13.VII.1930, coll. E. L. E. (*N° 4206*).

A new species for Santo Domingo, previously known from Costa Rica (on indet. Dilleniacea) and from Peru (on *Sauraja*). Our specimen agree completely well with the description. It is, in part, allied to *M.* (Irenina) *longipedicellata* Stev. found on the same family of the host plants, not for the lenght of the stalk cell of capitate hyphopodia (which is, of course, the most outstanding characteristic), but for the head cell frequently subangulate to angulate; the perithecium is not borne on a radial disk, and the mucronate hyphopodia are quite rare; the colonies are superficial, black, more or less indefinite, not or rarely confluent, fumagoid.

Fig. 58. *Meliola ochnacearum* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

181. MELIOLA (Irenina) OCHNACEARUM Cif., Ann. Myc., Vol. XXXVI, pag. 13 (1938). (Fig. 58).

On *Sauvagesia erecta* L. (Ochnaceae). An endemic species, found only once, and distributed by ourselves (Ciferri, 1938).

182. MELIOLA OCOTEICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 45 (1916).

On *Chrysophyllum bicolor* Poir. (Sapotaceae), as quoted by Ciferri and Fragoso and on *Phoebe montana* (Sw.) Griseb. (Lauraceae), as quoted by Ciferri. In common between Puerto Rico and Santo Domingo, in the first island found on *Ocotea* (Lauraceae) and *Chrysophyllum*; see Ciferri (1938); Ciferri and Fragoso (1925, under *M. "scoteicola"*, pro error in Ciferri, 1929).

183. * MELIOLA OLYGOPODA H. Syd., Ann. Mycol., Vol. XXI, pag. 89 (1923).

On *Meriania involucrata* (Desr.) Naud. (Melastomataceae), Cordillera Central, prov. Monte Cristy, Monción, VI. 1929, coll. R. C. (*N° ?3005* or *?3008*).

This species, found in Borneo on an undetermined Melastomatacea, is new to Santo Domingo. Apparently this is the first *Meliola* identified on *Meriania*. The setae are slightly shorter than in the diagnose (200—250 instead of 250—400 in length), but other morphological characteristic are identic, with exception of the mucronate hyphopodia, here absent, and the shorter capitate hyphopodia (18—26 diam. instead of 20—35).

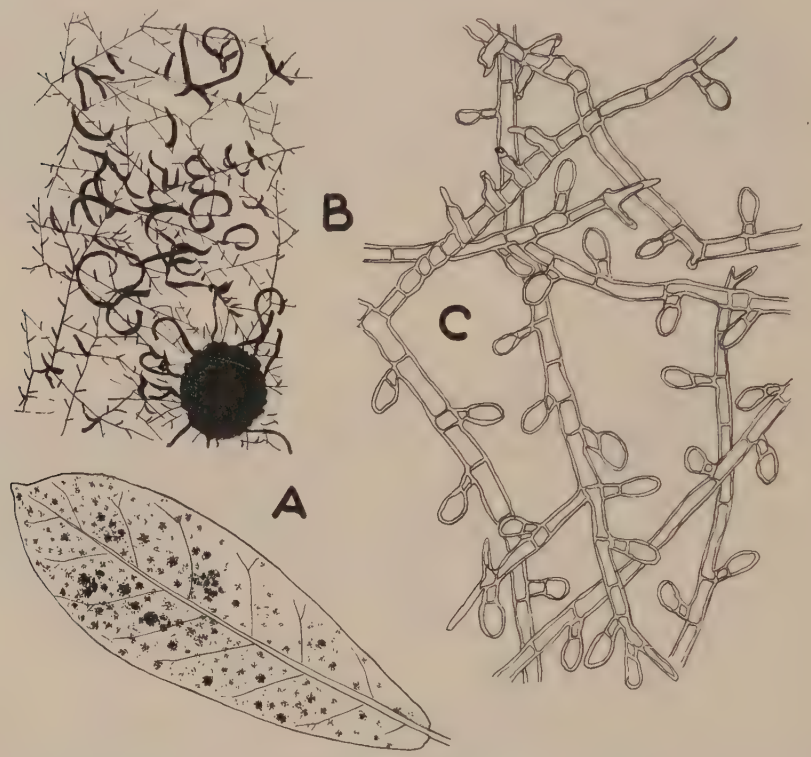

Fig. 59. *Meliola ophidiochaeta* Cif. *a*) Habitus of the fungus; *b*) General aspect of the mycelium with setae and a perithecium; *c*) Mycelium with hyphopodia.

184. ** **MELIOLA** (Eumeliola) **OPHIDIOCHAETA** Cif., n. sp. (Fig. 59). Coloniis epiphyllis, nigris, velutinis vel pulverulentis, superficialibus, isolatis vel sub-confluentibus, orbicularibus usque irregularibus, 1—3 mm. diam.; mycelio dilute flavo-brunneo usque brunneo, ex hyphis pauce ramosis, irregularibus, pro more oppositis, sinuosis usque rectis composito, 8—10 crasso; hyphopodiis capitatis paucis, alternantibus, rarius unilateralibus, numquam oppositis, 21—30 × 11—15, 40—70 distantibus, cellula apicali sphaerica vel ellipsoidea aut elongata, rotundata, simplici, 13—20 × 10—15, cellula basali evidenti, 8—10 longa; hyphopodiis mucronatis mediocriter abundantibus, oppositis vel unilateralibus, ab hyphopodiis capitatis non intermixtis, irregulariter ampulliformibus, apice subacutatis, base abrupte inflatis, 21—25 longis, 10—12 usque 3—5 crassis; sine setis perithecialibus, sed cum setis myceliaribus circiter stroma basali evolutis; setis myceliaribus irregulariter distributis, abundantibus vel paucis, nigris, curvatis usque spiralatis vel uncinatis, singulis vel aggregatis, obtusis, base inflata vel non, apice incrassato vel non, opacis, nigris,

200—300 longis, 14—15 basaliter, 8—10 apicaliter incrassatis, apicibus obtusis, rarius indistincte dentatis; perithecia nigra, sphaerica, distincte verruculosa, ex disco stromatico basali oriunda, 120—160 diam.; ascis, pro more, 2-sporis, diffluentibus; sporis brunneis usque nigridulis, subirregularibus, conoideo-ellipticis usque cylindroideis, pro more ellipsoideis, apicibus rotundatis vel non, 4-septatis, ad septa constrictis, 39—42 × 16—19.

HAB.: in foliis *Tabebuiae polyanthae* Urb. et Ekm. (Bignoniaceae), Valle del Cibao, prov. La Vega, La Vega, ad viam Rincón, 17.IV.1930, leg. E. L. E. (*N° 4175*).

Formula: $31\frac{1}{2}1.4221$. Colonies found only on the upper surface of the leaves, black to blackish, more or less velvety to dusty, superficial, diffuse at the periphery, black and dense at the centre, single, rarely confluent at all, frequently subconfluent, orbicular to irregular, 1—3 mm. diam. (from grayish to whitish if parasitized); mycelium pale yellowish-brown to brown, composed of sparingly septate, very irregularly, mostly opposite, asymmetric, branched hyphae, with segments slightly sinuose to straight, 8—10 thick; capitate hyphopodia not abundant, allways alternate, rarely unilateral, never opposite, 21—30 long, 11—15 thick, 40—70 apart, composed of the head cell from spheroid to elliptic or elongate, rounded at free and (never apiculate, lobate, angled or sinuate), 13—20 by 10—15, basal cell well evident, 8—10 long; mucronate hyphopodia quite abundant, opposite or unilateral, growing on separated mycelial branches, very irregularly bottle-shaped, and sub-acute or narrowed, base abruptly inflated, 21—25 in lenght, 10—12 thick at the base, 3—5 at the tip; without perithecial setae, but the mycelic setae are frequently

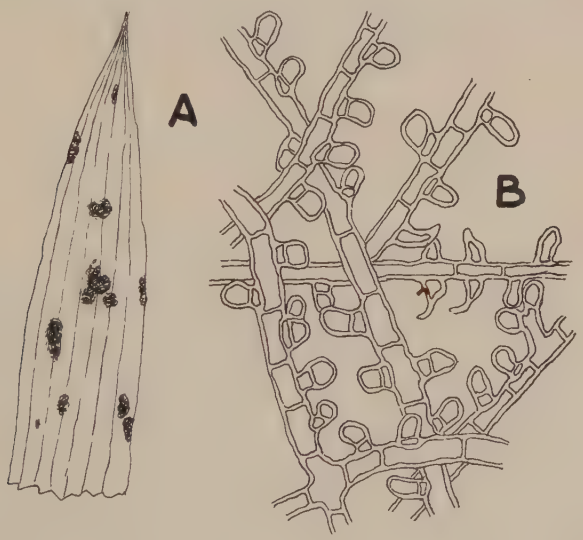

Fig. 60. *Meliola orchidacearum* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

growing on or near the basal disk, simulating the setosity of the perithecia; mycelial setae very irregularly distributed, in one sector very abundant, in another scarce or lacking at all, black, never straight, but curved up to almost spiralated, hooked or irregularly curved, scattered or aggregated in fascicles of 2—4 setae, obtuse, slightly torulose at the

base or at the tip or not, opac, black, 200—300 long, 14—15 thick at the base, 8—10 at the tip, tip obtuse, rarely indistinctly dentate; perithecia black, spheric with conic, well evident prominences, verruculated, growing on a disk, 120—160 diam.; asci, as a rule, 2-spored, very difflurent; spores brown to blackish, more or less irregular in shape, from conic-elliptic to cylindroid, more frequently ellipsoid, with one end narrowed or both rounded, 4-septate, narrowed at the septa, 39—43 by 16—19.

A species distinct from all other *Meliolae* for the characteristics of the mycelic setae. Most colonies are heavily parasitized also by Mucedineae, then with an irregular morphology. This species must be confirmed on better, unparasitized material.

185. MELIOLA (Irenina) ORCHIDACEARUM Cif., Ann. Myc., Vol. XXXVI, pag. 14 (1938). (Fig. 60).

On *Epidendrum cochleatum* L. (Orchidaceae), an endemic species distributed by ourselves (Ciferri, 1938).

186. ** **MELIOLA** (Irenina) **OZAMENSIS** Cif., n. sp. (Fig. 61).

Fig. 61. *Meliola ozamensis* Cif. Habitus of the fungus.

Plagulas indefinitas, orbiculares vel irregulares, singulas vel confluentes, nigras, sub-epiphyllas, 2—5 mm. diam., paginam superiorem foliorum tegens; mycelio ex hyphis obscure brunneis, parce ramosis, septatis, 4 crassis, composito; hyphopodia capitata numerosa, plus vel minus regulariter alternantia, irregulariter lobata, cellula apicali globosa, 11—15 diam. vel 10—16 × 10—13, cellula basali 2—4 longa; hyphopodia mucronata ampulliformia, 12—18 × 6—8, parte basali 7,5 crassa, parte apicali 3 crassa, subacuminata; sine setis perithecialibus myceliaribusque; peritheciis glabris, brunneo-nigris, plus minus sphaeroideis, 130—180 diam.; ascis evanescentibus; sporis brunneo-fuscis, 4-septatis, ad septa constrictis, 30—35 × 12—17.

HAB.: in foliis *Stigmatophylli angulosi* (L.) A. Juss. (Malpighiaceae). Llano Costero, prov. Santo Domingo, Ciudad Trujillo, ad rivas flumen Ozama, 14.XII.1929, leg. R. C. (*N° 2757*).

Formula: 3101.3220. Colonies not well delimitated, orbicular to more or less irregular, scattered or aggregated and confluent, black, epiphyllous,

2—5 mm. diam.; mycelium composed by hyphae dull-brown, scarcely branched, septate, with irregular segments, 4 in thickness; capitata hyphopodia abundant, more or less regularly alternate, irregularly lobate, composed of the head cell globose or subglobose, 11—15 in diam. or 10—16 by 10—13, with the basal cell quite evident, 2—4 in length; hyphopodia mucronata bottle-shaped, 12—18 in length, 6—8 in thickness at the base, 3 at the subacuminate, irregular free end; without mycelic or perithecial setae; perithecia glabrous, dull-brown or blackish, spheric or spheroid, simple, 130—180 in diam.; asci diffluent; spore dull-brown in color, 4-septate, narrowed at the septa, 30—35 by 12—17.

On the same family of Malpighiaceae has been found *M.* (Irenina) *glabra* B. et C., typically living on Rubiaceae, clearly distinct from this well characterized species.

187. * MELIOLA PALMICOLA Wint., Hedwigia, Vol. XXVI, pag. 31 (1887).

On *Oreodoxa regia* H.B.K. (= *Roystonea regia* (H.B.K.) O. F. Cook) (Palmae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 150 m., 16.II.1930, coll. R. C. (*N° ?3097*); as above, 27.II. 1930, coll. the same (*N° 3149*).

A species new to Santo Domingo, and apparently unfrequent. In our specimen the colonies are epiphyllous, loose, as a rule found on the upper surface of the leaf, isolated, scarce, more or less circular, 1—3 mm. diam.; the setae are normally straight and entire, but rarely also 1—3 (most frequently 2) denticulate, the teeths being very small (2—3 in length); capitate hyphopodia very singular in shape, frequently lobate. This same species was indicated in Puerto Rico under the binomial *M. denticulata* Wint., a morphologically allied species, but tipically found on Leguminosae. The formula, according Stevens, is: $31\frac{1}{3}1.5332$; according our first specimen showing shorter spores, it would be: $31\frac{1}{3}1.4332$. This species may be a transitional type to the extreme form with furcate setae, namely *M. furcata* Lév.

188. MELIOLA (Eumeliola) PANAMENSIS Stev. var. HISPANIOLENSIS Cif., Ann. Mycol., Vol. XXXVI, pag. 14 (1938).

On *Coccoloba laurifolia* L. (Polygonaceae). See Ciferri (1938). Only one record.

189. MELIOLA PANICI Earle, Muhlenbergia, Vol. I, pag. 12 (1901).

On *Lasiacis divaricata* (L.) Hitchc. (Graminaceae), quoted by Petrak and Ciferri (1930, 1932), and on *Olyra latifolia* L. (id.) quoted by Toro. On *Uniola virgata* (Poir.) Griseb. (id.), on *Andropogon bicornis* L. (id.) and on *Andropogon* sp. (id.), as quoted by Ciferri (1938); see Toro (1927). New records: on *Andropogon bicornis* L. (id.), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 275, 3.III.1930, coll. R. C. (*N° 3248*). On *Ichnanthus pallens* (Sw.) Munro (id.), as above, (*N° 3241*). On *Lasiacis divaricata* (L.) Hitchc. (id.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, VI. 1929, coll. R. C. (*N° 3008*). On *L. maculata* (Aubl.) Urb. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. E.L.E. (*N° 2754*). On *Olyra latifolia* L. (id.), as above (*N° 2741*). On *Pharus parvifolius* Nash (id.), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 300, 3.III.1930, coll. idem (*N° 3152*) (the last, a doubtful specimen with acute setae, 440—660).

This species is very frequently heavily parasitized, so that many specimens are sterile and determined from the general habitus of the

fungus, chiefly for the shape of the capitate hyphopodia. The specimen on *Lasiacis divaricata* possess spores and setae slightly shorter than in the description (formula: 3111.2222). The capitate hyphopodia of the fungus on *Pharus parvifolius* are very irregularly lobed. On *Uniola* the capitate hyphopodia are attenuate and plurilobate; the setae obtuse to acute, 450—600 in length; the spores 31—35 × 16—18. Probably a new host plant for this species. In the specimen *N° 3248* the setae are shorter (200—310 in length); perithecia 100—150; spores 32—36 × 10—13. An intertropical species.

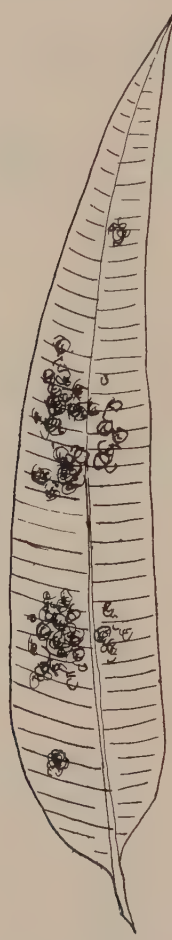

Fig. 62. *Meliola paralabatiae* Cif. Habitus of the fungus.

190. MELIOLA PANICICOLA H. et P. Syd., Ann. Mycol., Vol. XII, pag. 552 (1914).

On *Panicum glutinosum* Sw. (Graminaceae), Cordillera Central, prov. Santo Domingo Villa Altagracia, Loma Marián Chicle, ca. m. 800, coll. E.L.E. (*N° 2888*). On *Isachne rigidifolia* (Poir.) Urb. (id.), Cordillera Septentrional, prov. Santiago, top of Loma Diego de Ocampo, ca. m. 1250, 4.XII.1930, coll. idem (*N° 4257*). On *Leersia hexandra* Sw. (id.), Valle del Cibao, prov. La Vega, road between La Vega and Bonao, Rincón,

in swamp, 16.IV.1930, coll. E.L.E. & R.C. (*N° 4586*). As above, 17.IV. 1930, coll. E. L. E. (*N° 4517*).

In the specimen on *Isachne rigidifolia* the setae are obtuse to sub-obtuse, simple, slightly longer than in the type (145—250 to 700); spores slightly greater (46—50 by 16—19); perithecia about 200 in diam., the formula being: 3111.4222. The specimen is parasitized by a number of Dematiaceae. The specimen *N° 4586* on *Leersia hexandra* have abundant setae, as a rule obtuse to sub-obtuse, very rarely sub-acute, 217—290 in length, rarely to 300—400 and perithecia 200—250 in diam. The specimen *N° 4587* on the same host plant possess setae to 500 in length, and spores 38—42 by 13—15, the formula being: 3111.4232. An intertropical species. In common with the Philippine Islands. See CIFERRI (1933).

191. MELIOLA PARALABATIAE Cif., Ann. Mycol., Vol. XXXI, pag. 156 (1933). (Fig. 62).

On *Paralabatia fuertesii* Urb. (Sapotaceae). New records: Cordillera Septentrional, prov. Puerto Plata, Sosúa, 20.III.1930, coll. E. L. E. (*N° 3311*). An endemic rare species; see CIFERRI (1933).

192. ** **MELIOLA** (Irenina) **PARATHESIANA** Cif., n. sp.

Hypo-vel epiphylla, plagulas, 1—4 mm. diam., aterrimas, fumaginoideas, velutinas, confluentes, efformans; mycelio ex hyphis paucis, nigro-fuscis, parce ramosis, septatis, 7—9 crassis composito; hyphopodiis capitatis integris, rarius subintegris, sphaericis vel ellipticis, cellula globosa apicali 19—26 × 15—22, cellula basali 3,5—7 longa; hyphopodiis mucronatis non visis; peritheciis nigris, opacis, indistincte ostiolatis, sphaerico-depressis, 100—180 diam.; ascis diffluentibus, 2—4-sporis; sporis brunneis, 4-septatis, ad septa parum constrictis, apicibus rotundatis, 35—42 × 20—24.

HAB.: in pagina superiore et inferiore foliorum *Parathesis serrulatae* (Sw.) Mez (Myrsinaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, ca. m. 150, 7.I.1930, coll. E. L. E. (*N° 2884*).

Formula of the species: 3101.4320. Colonies superficial, both in the lower and upper pages of the host plant, superficial, very black, fumagoid, velvety, confluent, 1—4 mm. diam.; mycelium sparingly developed, poorly branched, dull-brown to black, septate irregular, 7—9 thick; capitate hyphopodia integrous, rarely sub-integrous, spheric or elliptic, with the head cell globose, 19—26 by 15—23, stalk cell 3,5—7 long; hyphopodia mucronata not observed; perithecial black, opac, indistinctly ostiolate, spherico-compressed, 100—180 diam.; asci diffluent, ? 2—4-spored; spores brown, 4-septate, slightly narrowed at the septa, ends rounded, 35—42 by 20—24.

The determination of this new species is somewhat doubtful, the colonies being thickly infested by symbiotic fungi, yet we have not doubt that this glabrous *Meliola* belongs to a new species. On *Myrsine* (Myrsinaceae) has been indicated *M.* (Irenina) *crustacea* Speg., tipically found on Magnoliaçeae, a species clearly different from the *Meliola* at hand. *M.* (Irenopsis) *parathesicola* Stev. (see below) is a very similar species (formula: 3401.4220), but showing perithecial setae, while in our specimen the perithecia are completely glabrous. It is possible that this *Meliola* subg. *Irenina* is, really, the species of the following number, with glabrate perithecia as an effect of the overgrowing fungi.

193. * MELIOLA (Irenopsis) PARATHESICOLA Stev., Ann. Mycol., Vol. XXV, pag. 435 (1927).

On *Parathesis serrulata* (Sw.) Mez (Myrsinaceae), Cordillera Central, prov. La Vega, Bonao, in the forest, without date, coll. R. C. (without number).

See the preceding species. New record for Santo Domingo of this Puerto Rican species.

194. MELIOLA PAULLINIAE Stev., Ill. Biol. Mon., Vol. II, pag. 45 (1916).

On *Paullinia pinnata* L. (Sapindaceae). New records of this interantillan species, on the same host plant: Cordillera Septentrional, prov. Puerto Plata, Sosúa, 20.III.1930, coll. E. L. E. (*N° 3322*); as above, Bajaboníco, 22.III.1930, coll. the same (*N° 3319*).

In the specimen *N° 3322* the spores are larger than in the description (formula 3111.4222); see CIFERRI (1929, 1931) and CHARDON (1927).

Fig. 63. *Meliola pavoniae* Cif. Mycelium with hyphopodia.

195. ** **MELIOLA** (Irenina) **PAVONIAE** Cif., n. sp. (Fig. 63).

Epiphylla; maculas atras, irregulares, minutas (1—2 mm. diam.), asterinaceas; mycelio ex hyphis brunneis, dense septatis, parce ramosis, circiter 90° insertis, 6—8 crassis, efformato; hyphopodiis capitatis numerosis, unilateralibus vel oppositis, cellula superiore globosa vel ovata aut leviter sinuata, 9—12 diam. vel 16—19 × 9—12, cellula basali distincta 3,5—7 longa; hyphopodiis mucronatis raris paucisque, elongatis, simplicibus; sine setis myceliaribus perithecialibusque; perithecia nigra, opaca, marginaliter sinuata, 250 diam. vel minus; ascis bisporis; sporis brunneis, 4-septatis, ovatis, ellipsoideis vel cylindroideis, ad septa leviter constrictis, 38—41 × 18—20.

HAB.: in pagina superiore foliorum *Pavoniae spicatae* Cav. (Malvaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, shores of Río Ozama, leg. E. L. E. (*N° 2799*).

Formula: 3101.4230. Apparently this is the first glabrous *Meliola* found on Malvacee, and the first Meliolinea recorded on *Pavonia*.

196. * MELIOLA PERPUSILLA H. et P. Sydow, Philipp. Journ. Sci., Bot., Vol. VIII, pag. 486 (1913).

On the leaves of *Marsdenia clausa* R. Br. (Asclepiadaceae), Llano Costero, prov. Santo Domingo, Haina, Estación Nacional Agronomica, 7.III.1926, coll. R. C. (*N° 622 bis*).

Apparently this is the first record of the species (found on the Philippine Islands on *Tylophora*, a genus of the same family of plants) outside the insular Polynesia. Our specimen agree well with the description (formula: 3111.2222), the setae being acute.

In the same leaves is frequently associated with *Asterina peraffinis* Speg., found previously in South America and Tropical Africa.

197. MELIOLA (Irenina) PERSEAE Stev., Ill. Biol. Mon., Vol. XVII, pag. 140 (1925).

On *Persea americana* Mill. (= *P. gratissima* Gaertn.; = *P. persea* Cock.) (Lauraceae). New records on the same host plant: Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2806*); Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 27.II.1931, coll. R. C. (*N° 3133*).

A quite common interantillean species. See CHARDON (1927, under *Irene*); CIFERRI (1927, 1929, 1938).

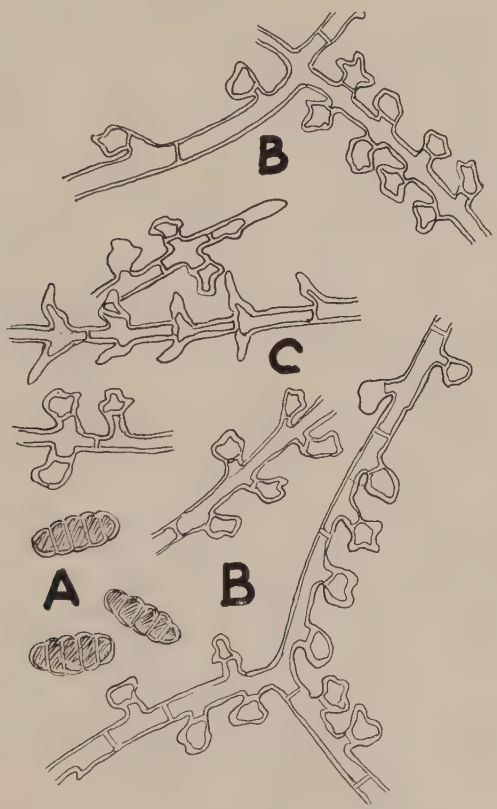

Fig. 64. *Meliola phaeocephala* Cif. *a*) Spores; *b*) Mycelium with capitate hyphopodia; *c*) Id. with mucronate hyphopodia.

198. ** **MELIOLA** (Irenina) **PERSPICUA** Cif., n. sp.

Epiphylla, coloniis nigris, orbicularibus usque irregularibus, singulis vel sub-confluentibus, 1—4 mm. diam.; mycelio ex hyphis brunneo-fuscis, intertextis, septatis, ramulis circiter 90° insertis, 7—9 crassis, composito; hyphopodiis capitatis, alternantibus vel unilateralibus, numerosis, cellula

apicali sphaerica vel sphaeroidea, usque ovoidea, 15—18 diam. vel 18—22 × 12—14, cellula basali distincta, 3—4 longa; hyphopodiis mucronatis, numerosis, ampulliformibus, 15—18 longis, base 7—8, apice 2—3 crassis; setis myceliaribus perithecialibusque carentibus; perithecia sphaerico-depressa, nigra, non rarius collapsa, margine profunde inciso-lobato, 100—125 diam.; ascis non visis; sporis brunneis, ellipticis vel ovoideis usque cylindraceis, 4-septatis, ad septa leviter constrictis, 35—38 × 15—19.

HAB.: in pagina superiore foliorum *Cissi erosae* L. C. Rich. (Vitaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1929, coll. E. L. E. (*N° 2857*).

Formula: 3101.3220. This is the first specie of *Meliola* of the subgenus *Irenina* found on Vitaceae. Many species of the same subgenus are similar, but not identic.

199. ** **MELIOLA** (Eumeliola) **PHAEOCEPHALA** Cif., n. sp. (Fig. 64). Epiphylla, coloniis mycelio ex hyphis parce ramosis, ramulis angulis acutis, oppositis, regulariter dispositis, brunneis, septatis 5—7 diam. efformato; hyphopodiis capitatis numerosis, oppositis, rarius alternis, etiam opposito-alternantibus usque intermixtis, cellula apicali brunneo-fusca, plus minus distincte 3-lobata usque irregulari, 15—26 × 7—13, cellula basali distincta vel non, usque 6 longa, dilute colorata usque sub-hyalina; hyphopodiis mucronatis paucis, irregulariter elongatis, pro more oppositis; setis myceliaribus paucis, acuminatis, nigris, opacis, 400—600 longis, 7,5—9 crassis, rarius usque 11 diam.; sine setis perithecialibus; peritheciis glabris, sphaerico-applanatis, nigris, 100—150 diam.; ascis non visis; sporis brunneis, 4-septatis, elliptico-ovoideis aut cylindroideis, ad septa leviter constrictis, 36—42 × 14—16.

HAB.: in pagina superiore foliorum *Serjaniae sinuatae* Schum. (Sapindaceae) Valle del Cibao, prov. Santiago, Hato del Jaque, m. 150, 15.II.1930, coll. E. L. E. (*N° 3021*) (typus); Cordillera Septentrional, prov. Santiago, Cerro del Palo Quemado, 700 m., 19.I.1930, leg. idem (*N° 3130*).

Formula: 3113.4223. The characteristics of the colonies are uncertain, as the fungus is associated with other species. The *Meliola* is well distinct from other species for the dull color of the head of the capitate hyphopodia, as compared to the lighter color of the basal cell. This species is allied to *M. lionii* Stev. and to *M. thouiniae* Earle, both described on Sapindaceae, for the capitate hyphopodia opposite and alternate, but distinct for shape, size and color of the same elements. It is unrelated to *M. serjaniae* Stev. and to *M. acrotricha* Syd. var. *diversiseta* Cif.

200. MELIOLA PHILODENDRI Stev., Ill. Biol. Mon., Vol. II, pag. 60 (1916).

On *Philodendron angustatum* Schott. (= *P. krebsii* Schott) (Araceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, rain forest, 10.II.1930, coll. R. C. & E. L. E. (*N° 2911*).

A species found in Puerto Rico and Santo Domingo; see CIFERRI (1931).

201. **MELIOLA** (Irenina) **PILEAE** (Hansf.) nob., n. comb.

= *Irenina pileae* Hansf., Proc. Linn. London, Vol. CLX, pag. 124 (1949).

On *Pilea parietaria* (L.) P. DC. (Urticaceae). Previously quoted under *M. triloba* Wint. New record on the same host plant: Cordillera Septentrional, prov. Santiago, Palo Quemado, between Santiago and Puerto Plata, 600 m., 19.II.1930, coll. E. L. E. (*N° 3083*).

202. MELIOLA PIPERIS Earle, Muhlenb., Vol. I, pag. 12 (1901). (Fig. 65). Previously quoted on leaves of *Piper aduncum* L., *P. samanense* Urb. and twigs of *P. medium* L. (Piperaceae), by Toro (1927) and Ciferri (1931, 1938). New records of this neotropical species: on *P. aduncum* L.,

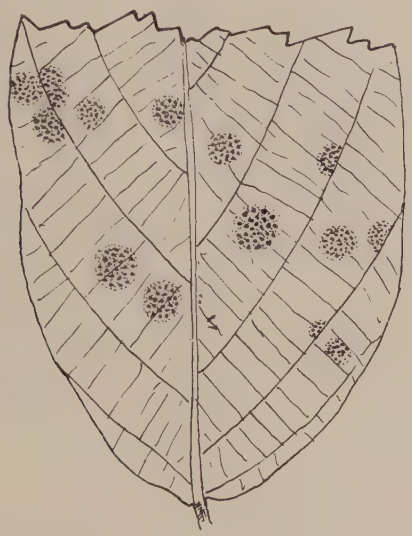

Fig. 65. *Meliola piperis* Earle. Habitus of the fungus.

Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2880*). On *P. jacquemontianum* (Kunth) C. DC., Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929 (*N° 2802*), this specimen being poorly developed.

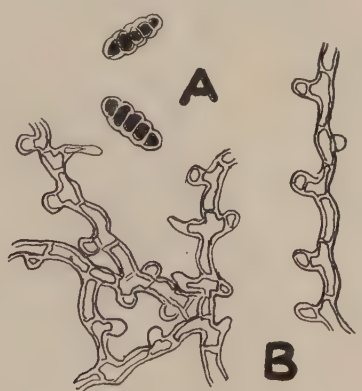

Fig. 66. *Meliola piptadeniae* Cif. *a*) Spores of the fungus; *b*) Mycelium with hyphopodia.

203. ** **MELIOLA** (Irenina) **PIPTADENIAE** Cif., n. sp. (Fig. 66).
Plagulae magnae, tenuiter arachnoideae, diffusae, et saepe totam foliolam occupantes; mycelio laxo, plerumque parco, ex hyphis brunneolis tortuosis, septatis, irregulariter ramosis, 3,5—5,5 crassis, efformato; hyphopodiis capitatis alternantibus vel unilateralibus, paucis, 10—20

separatis, uno pro quoque angulo, cellula superiore ovata vel sphaerica aut sub-irregulari, 7,5—11 × 5—7, cellula basali brevi vel carente; hyphopodiis mucronatis paucissimis, ampulliformibus, irregularibus, 10—12 longis, base 3—4 crassis, apice attenuatis, cum hyphopodiis capitatis intermixtis; setis myceliaribus perithecialibusque carentibus; perithecia nigra, sub-sphaerica, glabra, 120—180 diam.; ascis non visis; sporis brunneis vel nigridulis, ellipticis usque cylindraceis, 30—35 × 10—13, 4-septatis, ad septa leniter constrictis.

HAB.: amphigena in foliis *Piptadeniae peregrinae* (L.) Benth. (Leguminosae), Llano Costero, prov. Santo Domingo, Los Alcarrizos, m. 50, 11.II.1930, coll. E. L. E. (*N° 3102*).

Forming large effuse spots, arachnoid, also on all the leaflet; the formula is 3101.3220. Only a few species of glabrous *Meliolae* are found on Mimosaceae. This species is allied to *M.* (Irenina) *lonchocarpi* Speg. but distinct for shape and size of capitate hyphopodia, and size of other morphological elements.

204. MELIOLA (Irenina) PLEBEJA Speg., Bol. Acad. Nac. Ci. Cordoba, Vol. XI, pag. 238 (1889).

On *Solanum rugosum* Dun. (Solanacee). Quoted by Toro (1927) on *Solanum torvum* Sw. under the binomial *Irene solani* (Stev.) Toro. New

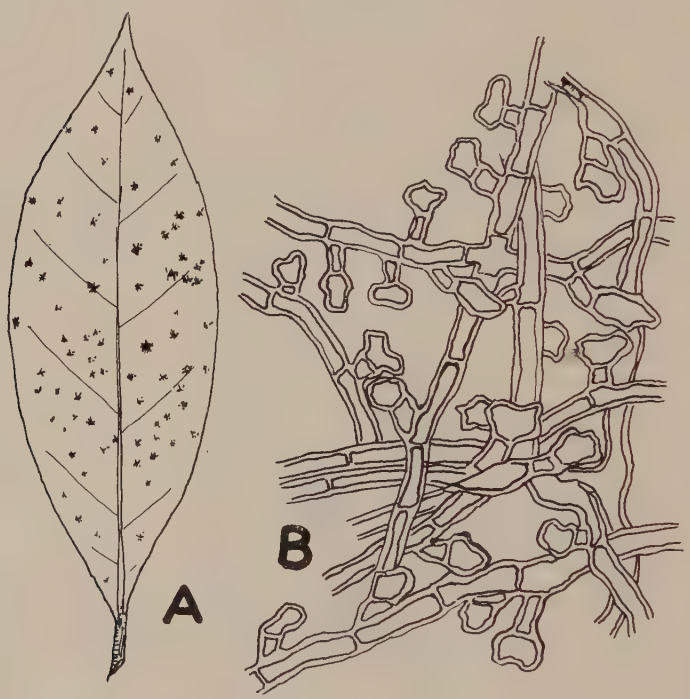

Fig. 67. *Meliola plebeja* Speg. var. *brunfelsiae* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

records: on *Solanum rugosum* Dun., Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930 (*N° 2847*); Cordillera Septentrional, prov. Santiago, Loma de Ocampo m. 1000, VII. 1929, coll. R. C. (*N° 2443*). On *S. ciliatum* L. (id.), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930 (*N° 3027*).

The last specimen is not completely developed. See STEVENS (1917, under *Irenina*) and CIFERRI (1933).

205. ** MELIOLA (Irenina) PLEBEJA Speg. var. **BRUNFELSIAE** Cif., n. var. (Fig. 67).

A typo recedit sporis minoribus (28—30 × 12—15); hyphopodiis capitatis, ellipsoideis, ovoideis, cylindroideis aut irregularibus, cellula superiore irregulariter lobato-angulosa aut incisa, cellula basali carente vel 3—5 longa, capitulis 11—14 × 8—10 usque 8—12 × 6—10.

HAB.: in pagina superiore foliorum *Brunfelsiae abbottii* Leonard (Solanaceae), Península de Samaná, prov. Samaná, Samaná, Laguna, Los Bañaderos Prietos, circ. 525 m. 28.V.1930, coll. E. L. E. (*N° 4211*).

Of the many species of the subgenus *Irenina* found on Solanaceae, this varieties is distinct in having capitate hyphopodia deeply incise-lobate, as a rule irregularly lenghtened, but it is of the same cycle of *M. plebeja*, which formula is 3101.4220, the formula of the variety being 3101.2220. The colonies are blackish, more or less rounded, effuse, from 0,5 to 5 mm. in diam., frequently arachnoid. The spores are cylindric and slightly narrowed at the septa.

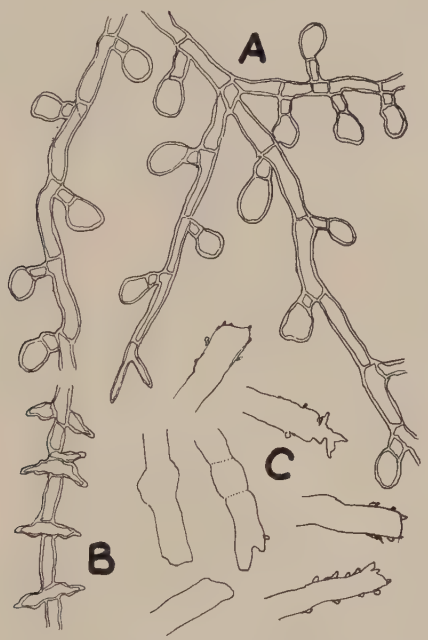

Fig. 68. *Meliola polyodonta* H. Syd. *a*) Mycelium with capitate hyphopodia; *b*) Mycelium with mucronate hyphopodia; *c*) Tips of the setae.

206. * MELIOLA (Eumeliola) POLYODONTA H. Syd., Ann. Myc., Vol. XXIV, pag. 303 (1926). (Fig. 68).

On *Vigna vexillata* A. Rich. (Leguminosae), Cordillera Central, prov. La Vega, Bonao, Sabana del Puerto, without date, leg. R. C. et E. L. E. (*N° 4190*).

An interesting species, described from Costa Rica on an unknown Leguminosa, this record being, apparently, the second for the species.

It agree well with the description, having the same formula: $31\frac{1}{3}1.3221$). The spores are 39—42 by 16—18; the setae are teethed to irregularly thickened, shortly branched near the tip, but more frequently obtuse; in many cases verruciform denticles, up to 3—4,5, are present, slightly longer than in the description; the tip may be also very shortly bifurcate to pluribranched, the branches being, at least, up to 6 long; the setae are straight to slightly curved, from sub-septate to 1—2-septate near the tip, and not rarely slightly narrowed at the septa, from brown to blackish in color, with lighter tip; the capitate hyphopodia are, at least, 18 by 11. In spite of the anomalous characteristics they are true setae.

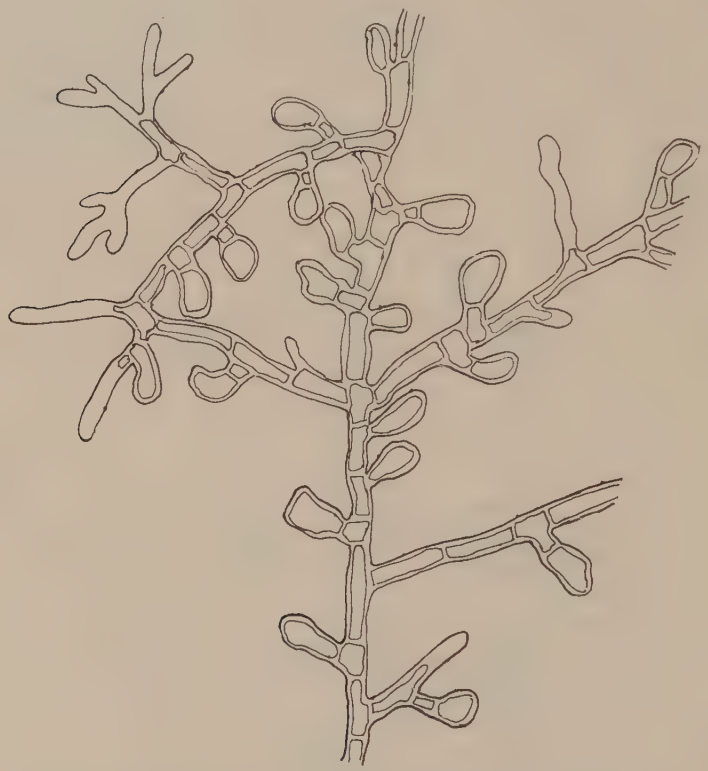

Fig. 69. *Meliola popowiae* Doidge. Mycelium with hyphopodia.

207. MELIOLA POPOWIAE Doidge, Trans. Roy. Soc. South Africa, Vol. VIII, pag. 142 (1920). (Fig. 69).

Quoted by Toro (1927) on *Annona reticulata* L. (Annonaceae). New records: on the same host plant, Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. R. C. (*N° 2780*). On *A. glabra* L., as above, 14.XII.1929 (*N° 2762*). On *A. montana* Macf., Peninsula de Samaná, prov. Samaná, near the town, 2.V.1930, coll. E. L. E. (*N° 4217*).

The specimen on *A. reticulata* is slightly different for the shorter spores (less than 30) and shorter setae (generally less than 250) from the description, the formula being 3111.2221 instead of 3111.3222.

On *A. glabra* circular, scattered or confluent, black spots, generally

localized on the upper side of the leaf, are evident; the setae are obtuse and shorter than in the description (90—120 in lenght), and the perithecial smaller (about 50—70 in diam.). The formula, as deduced from this specimen, would be: 3111.3211.

On *A. montana* the setae are shorter than in the description (to 120 instead of 300—500), and so rare and scattered that the fungus may be easily confused with an *Irenina*. The capitate hyphopodia are elliptic or ovoidal to sub-cylindric, very rarely or not at all globose 21—28 by 11—14, quite regular in shape; the spores are perfectly and regularly ellipsoid, not narrowed at the septa (rarely very slightly narrowed), 32—36 by 18—20.

208. **MELIOLA** (Irenopsis) **PORTORICENSIS** (Stev.) Cif., n. comb.

Syn.: *Irenopsis portoricensis* Stev., Ann. Mycol., Vol. XXV, pag. 433 (1927). On *Turpinia panniculata* Vent. (Staphyleaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 12.II.1930, coll. R. C. (*N° 3092*). On the same host plant: Cordillera Central, prov. Samaná, Sabana de la Mar, 300 m. ca., 14.VII.1930, coll. E. L. E. (*N° 4198*). See Toro (1927) and Ciferri (1938).

209. MELIOLA PRAETERVISA Gaill., Le Genre Mel., pag. 78 (1892).

Quoted by Toro (1927) and Petrak and Ciferri (1932) on *Coccoloba* (= *Coccolobis*) *pubescens* L. and *C. grandifolia* Jacq. (Polygonaceae), this cosmopolitan, intertropical species is to be referred to *M. angusta* Stev. et Teh.

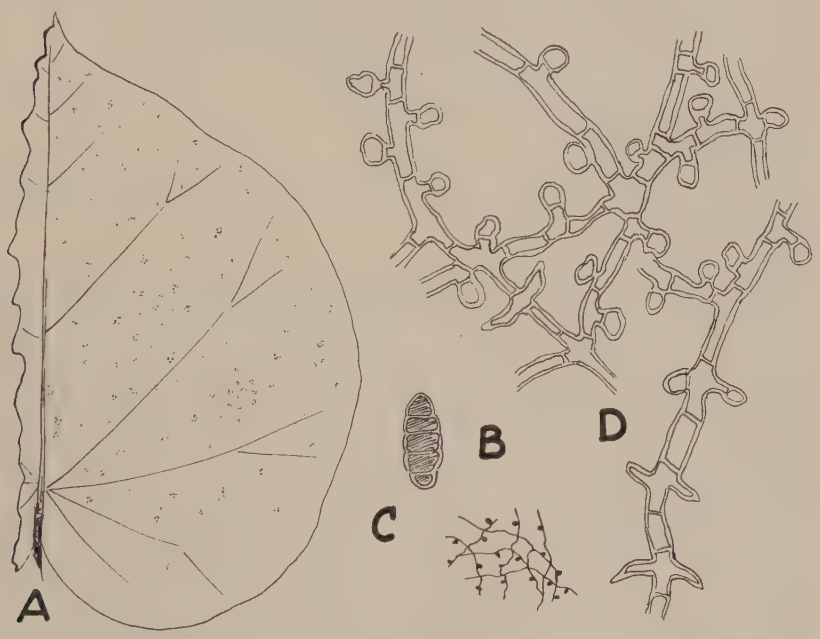

Fig. 70. *Meliola procera* Cif. *a*) Habitus of the fungus; *b*) Spore; *c*) General aspect of the mycelium with hyphopodia; *d*) Mycelium with hyphopodia.

210. MELIOLA (Irenina) PROCERA Cif., Ann. Mycol., Vol. XXXVI, pag. 15 (1938). (Fig. 70).

On *Hibiscus tiliaceus* L. (= *Paritium tiliaceum* (L.) A. Juss.) (Malvaceae). An endemic species described by ourselves. New record on the

same host plant: Valle del Cibao, prov. San Francisco de Macoris, Cotuý, 18.IV.1930, coll. E. L. E. (*N° 4602*). See CIFERRI (1938).

211. * **MELIOLA** (Irenina) **PSEUDORADIATA** Cif., n. nom.
Syn.: *Irene alchorneae* Stev. et Teh., Mycol., Vol. XVIII, pag. 21 (1926).
= *Irenina alchorneae* Stev., Ann. Mycol., Vol. XXV, pag. 452 (1927).
On *Alchorneopsis portoricensis* Urb. (Euphorbiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, rain forest, m. 250, 5.II.1929, coll. E. L. E. (*N° 2854*).
This specimen has been casually collected with the Ekmanian specimen *N.H. 11450*. It is the first report outside the type locality (British Guiana) and apparently the first Meliolinea found on the genus *Alchorneopsis*. The specimen agree well with the description of the species.
A *Meliola* (*Eumeliola*) *alchorneae* Stev. et Teh. is described on the same paper by the same mycologists; having priority, a new same is proposed for *Meliola* (*Irenina*) *alchorneae* Stev. et Teh.

212. MELIOLA PSIDII Fries, Linnaea, Vol. V, pag. 549 (1830).
On *Psidium guajava* L. (Myrtaceae).
A frequent, neotropical species. New records: Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. R. C. (*N° 2812*). Valle del Cibao, prov. Espaillat, Moca, Sabana de San Lorenzo, 8.VII.1929, coll. idem (*N° 2915*). Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. idem (*N° 2896*). The spores of the last quoted specimen are smaller than in the tipe. See BERKELEY (1852); CIFERRI (1927); CIFERRI and FRAGOSO (1925, 1926, 1927) and TORO (1927), also as *M. amphitricha* Fries.

213. MELIOLA PSYCHOTRIAE Earle, Bull. New York Botan. Garden, Vol. III, pag. 308 (1905).
Quoted on *Rondeletia brachycarpa* (Griseb.) Wright, *Randia mitis* L., *Borreria laevis* Griseb. and *Exostema caribaeum* (Jacq.) R. & Sch. (Rubiaceae), by CIFERRI (1938), PETRAK and CIFERRI (1930), STEVENS (1917) and TORO (1927).
A not rare species, found on many members of the Rubiaceae family. New records: on *Psychotria berteriana* P. DC., Cordillera Septentrional, prov. Santiago, Loma Diego de Ocampo, m. 950, coll. R. C., VII. 1929 (*N° 2433*). On *Randia aculeata* L., Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2781*). On *Hemidiodia ocymifolia* K. Schum., Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2800*). On *Hamelia patens* Jacq. (= *H. erecta* Jacq.), Valle del Cibao, prov. Espaillat, Estación Nacional Agronomica, 15.III.1930, coll. R. C. (*N° 2376*); Peninsula de Samaná, Samaná, Sánchez, 19.IV.1930, coll. E. L. E. (*N° 4582*).
The determination of this intertropical species on *Psychotria berteriana* is quite doutfull, as heavily overgrown by associated fungi. The specimen on *Randia aculeata* posses spores only of 37—40 by 15—20. The spores of the specimen on *Hemidiodia ocymifolia* are not narrowed at the septa, and the perithecia smaller (100 or less in diam.). The specimen on *Hamelia patens* is interesting in that the fungus is glabrous, and apparently allied to *M.* (Irenina) *penicilliformis* Gaill. and *M.* (Irenina) *seminata* B. et C., but differing for the very regular shape of capitate hyphopodia (ovate or sub-elliptic to sub-acuminate, but never lobate or sub-lobate), for the very scarce mucronate hyphopodia, alternating the capitate hyphopodia, and for the smaller spores (28—30 by 11—15). The most alike species in

undoubtly *M. psychotriae*, and it is referred to this species on the supposition that the setae are lacking by the association with symbiotic fungi. The Samaná specimen on *Hamelia patens* is offering spores slightly greater than in the description (34—36 by 15—17), setae 220 long, very few and localized almost only around the perithecia; perithecia agregate, about 150 in diam.

214. ** MELIOLA PSYCHOTRIAE Earle var. **GONZALAGUNIAE** Cif., n. var. (Fig. 71).

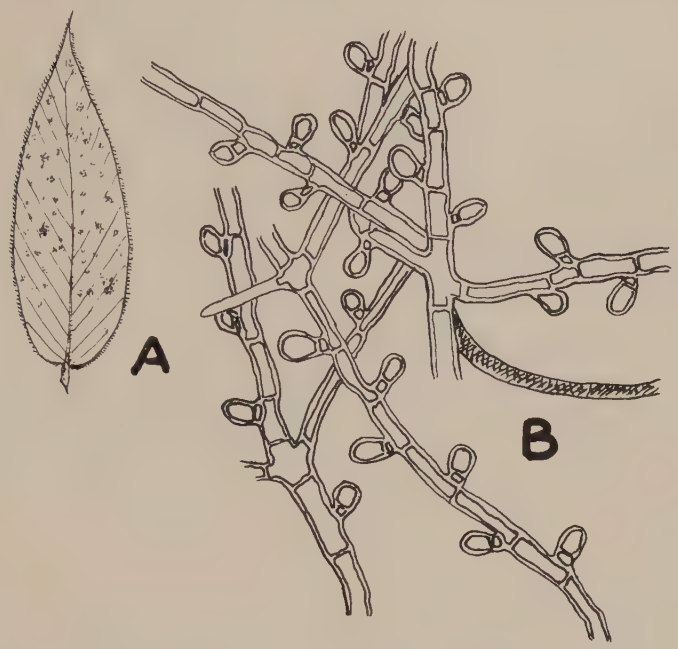

Fig. 71. *Meliola psychotriae* Earle var. *gonzalaguniae* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia and the base of a seta.

A specie differt coloniis minutis, delicatis, quasi arachnoideis, effusis superficialibus, 0,5—3 mm. diam., pro more 0,5—1,5 mm.; mycelio parco et laxo, hyphis paucis opposite ramosis composito; setis myceliaribus rarissimis isolatisque, usque sine setis; sporis 26—30 × 13—15.

HAB.: in pagina inferiore foliorum *Gonzalaguniae spicatae* (Lam.) Maza (Rubiaceae), Peninsula de Samaná, prov. Samaná, Samaná, prope Maria Luisa, 21.VI.1930, coll. E. L. E. (*N° H. 15379*).

Formula of this variety: 3111.2221. The general habitus is that of *M. psychotriae*, but the colonies are very delicate, very small, and composed of a few, little developed mycelic branches; capitate and mucronate hyphopodia as in the type species, the former being ovate to elliptic, regular in shape, head cell 13—16, basal cell 2—4 long; setae very few: as a rule absent, and, when present, only two or three, curved, obtus to subacute, rarely straight, 140—300 long, 6—8 thick; perithecia 90—130 in diam.

This variety appears to be a poor form of *M. psychotriae*, being allied to the subgenus *Irenina*. It may be distinct as a variety the specimen being not overgrown by fungi.

The specimen has been casually collected by the late botanist E. L. EKMAN within a phanerogamic specimen.

215. MELIOLA PTERIDICOLA Stev., Ill. Biol. Mon., Vol. II, pag. 28 (1916).
On *Asplenium cristatum* L. (Filices), Cordillera Central, prov. Santo Domingo, El Manielito, 11.II.1930, coll. E. L. E. (*N° 3137*).
A new record of the Central American and Antillean species. The spores are slightly greater than in the description (43—46 by 17—19 instead of 35—40 by 14); the setae are 165 long, very scarce and frequently absent. Our specimen agree well with the description of the species, previously interpreted by STEVENS as a species without mycelic setae. See CIFERRI (1933).

216. * **MELIOLA** (Irenina) **RENOVATA** Cif., n. nom.
Syn.: *Irenina aegiphilae* Hansf., Proc. Linn. Soc. London, Vol. CLX (2), pag. 134 (1949), non *Meliola aegiphilae* Stev.
On *Aegiphila elata* Sw. (Verbenaceae), Valle del Cibao, prov. Duarte, Pimentel, roadside from Pimentel to San Francisco de Macoris, VIII. 1929 (without number and collector).
The problem of the *Meliolae* on *Aegiphila elata* is quite confused. Apparently two forms of this genus of fungi are present in the same plants and locality, even in the same leaves: one, clearly parasitic and beautifully evoluted, is surely *M. aegiphila* Stev., a tipical *Eumeliola*; the second species has been isolated by HANSFORD on Dominican specimens, and described as *Irenina aegiphilae*. Accepting *Irenina* as a subgenus, it must be denominated with a new specific name: *Meliola renovata*. This species is not parasitic as *M. aegiphilae* Stev.; for the description see HANSFORD, l.c.

217. MELIOLA ROUREAE H. & P. Syd., Ann. Mycol., Vol. XV, pag. 191 (1917).
On *Rourea surinamensis* Miq. (Connaraceae). New records of this previously quoted species: Cordillera Central, prov. Santo Domingo, La Cumbre, 300 m. ca., 3.III.1930, coll. E. L. E. (*N° 3158*); as above, Villa Altagracia, 7.I.1929, coll. idem (*N° 2871*). See CIFERRI (1931), PETRAK and CIFERRI (1932).

218. MELIOLA RUDOLPHIAE Stev., Ill. Biol. Mon., Vol. II, pag. 43 (1916).
On *Rhodopis planisiliqua* (L.) Urb. (Leguminosae), quoted by CIFERRI and FRAGOSO (on *Rudolphia volubilis*, a Porto Rican species allied to the Dominican *Rhodopis planisiliqua*). New record on the same host plant: Cordillera Central, prov. Santo Domingo, Villa Altagracia, toward Río Isabel, m. 300 ca., 12.II.1930, coll. E. L. E. (*N° 3032*). On *Centrosema virginianum* (L.) Benth. (id.), Llano Costero, prov. Santo Domingo, La Caleta, m. 0—10, 10.II.1930, coll. E. L. E. & R. C. (*N° 3135*).
The species is in common with Puerto Rico. The spores of the fungus on *Rhodopis* are slightly smaller than those indicated in the description (40—44 instead of 48—51). The taxonomic position of the fungus on *Centrosema virginianum* is quite doubtful: the spores are shorter than in the description (35—38 by 11—13), but other characteristics agree well with the description. On *Centrosema* has been recorded *M. desmodii* K. et R. and *M. bicornis* Wint., both showing alternate and opposite hyphopodia, while in our specimen the capitate hyphopodia are only alternate. See CIFERRI and FRAGOSO (1928; by error the species has been indicated on *Rudolphia volubilis*).

218. ** **MELIOLA SABICEAE** Cif., n. sp. (Fig. 72).

Amphigena, plagulas plus minus orbiculares, minutas, 0,5—1 mm. diam., singulas, sparsas, nigras efformans; mycelium ex hyphis dense sed irregulariter ramosis, opacis, brunneo-nigris, dense intertextis, tortuosis, 5—6 crassis, compositum; hyphopodiis capitatis uniformibus, ovoideis vel ellipticis, alternantibus vel unilateralibus, 16—22 by 7,5—9,5, cellula basali 3,5—7,5 longa, prope angulo singulatim disposita; hyphopodiis mucronatis regulariter ampulliformibus, unilateralibus vel alternantibus

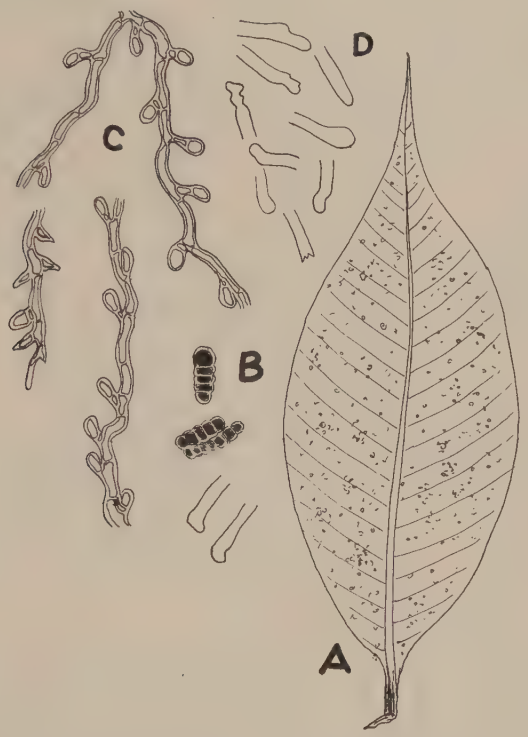

Fig. 72. *Meliola sabiceae* Cif. *a*) Habitus of the fungus; *b*) Spores; *c*) Mycelium with hyphopodia; *d*) Tips of the setae.

aut oppositis, 15—18,5 × 5,5—7, hyphopodiis capitatis intermixtis; setis myceliaribus paucis, nigridulis, sub-opacis, plus minus rectis, saepe ad apicem obtusis, non rarius inflatis vel contortis, 360 longis vel minus; setis perithecialibus abundantibus, myceliaribus affinibus; peritheciis sphaericis, nigris, depressis, sinuatis, 130—160 diam.; ascis diffluentibus, 2—4-sporis; sporis brunneo-fuscis, ellipsoideis vel cylindraceis, apicibus rotundatis, rarius leviter reniformibus, 4-septatis, ad septa sub-constrictis, 26—30 × 11—13.

HAB.: in foliis *Sabiceae hirsutae* H.B.K. (Rubiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 275 ca., 3.III.1930, leg E. L. E. (*N° 3249*).

Formula of this species: 34½1.2122. This species is different in many ways from the *Meliolae* on Rubiaceae showing mycelic and perithecial setae, firstly for the shape of the setae. Apparently this is the first *Meliola* found on the genus *Sabicea*. The disposition of the capitate

hyphopodia on the tortuose mycelium is characteristic, one for each angle, together with the mucronate hyphopodia.

219. * MELIOLA SAKAWENSIS P. Henn., Hedwigia, Vol. XLIII, pag. 141 (1904).

On *Lantana trifolia* L. (Verbenaceae), Cordillera Septentrional, prov. Santiago, Las Majaguas, m. 700, 14.II.1930, coll. E. L. E. (*N° 3019*). On *L. aculeata* L. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, coll. id. (*N° 2578*). On *Petitia domingensis* Jacq. (id.), as above, coll. R. C. (*N° 2578 bis*).

A new species for Santo Domingo. The specimen on *Lantana trifolia* possess setae from sub-acuminate to acute, never obtuse; the perithecial setae are present or not; the setae are lighter in color near the tip, and also sub-obtuse; spores 31—40 by 11—14. On *Petitia domingensis* the capitate hyphopodia are scarce, very variable in shape, from clavate to irregular, 30 by 8—10, with a long basal cell, but also spheroid, with a short basal cell, 10—18 by 11—13 at all; mucronate hyphopodia very abundant; perithecia slightly greater than in the description. According the specimen, the formula would be 3111.3231. Apparently, this is the first *Meliola* found on the genus *Petitia*.

M. sakawensis is an intertropical species, not clearly different from *M. durantae*, so that both species may be fused or, at least, reduced one to a variety of the other. See Toro (1927, under *M. ambigua* Pat. et Gaill.), Petrak and Ciferri (1930, 1932, as above).

220. MELIOLA SAMYDAE Cif., Ann. Mycol., Vol. XXIX, pag. 285 (1931).

On *Samyda pubescens* L. (= *S. rosea* Sims.) (Flacourtiaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2826*). New record: Cordillera Septentrional, prov. Puerto Plata, Sosúa, 30.III.1930, coll. E. L. E. & R. C. (*N° 3312*,) a specimen densely overgrown by fungi. An endemic species previously quoted by Ciferri (1931).

221. MELIOLA SAPINDACEARUM Speg., Rev. Arg. Hist. Nat., Vol. I, pag. 29 (1891).

An intertropical species. New records: on *Melicocca bijuga* L. (Sapindaceae) cult., Valle del Cibao, prov. Espaillat, Moca town, in garden, 22.II.1930, coll. E. L. E. & R. C. (*N° 3087*). On *Sapindus saponaria* L. (id.), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 15.III.1930, coll. R. C. (*N° 3274*).

The specimen on *Sapindus saponaria* is allied to *M. odontocephala* Syd. on *Harpellia* (Malpighiaceae), but the shape of capitate hyphopodia is different. The spores are slightly greater than in the description (41—45 by 11—12); perithecia of 150—180 in diam.; setae 200—220 in length. See Toro (1927) and Ciferri (1931).

222. MELIOLA (Irenina) SELAGINELLARUM Cif., Ann. Mycol., Vol. XXXVI, pag. 16 (1938). (Fig. 73).

An endemic species previously quoted by Ciferri (1938) on *Selaginella stolonifera* (Sw.) Spr. (Selaginellaceae). Only one record.

223. MELIOLA (Irenina) SEMINATA Berk et Curt., Journ. Linn. Soc. London, Vol. X, No. 885 (1868).

An interamerican species quoted many times for Santo Domingo on *Guettarda pungens* Urb. and *Psychotria pubescens* Sw. (Rubiaceae).

New records: on *Psychotria berteriana* P. DC. (id.), Cordillera Septen-

trional, prov. Puerto Plata, Loma Isabel de Torres, m. 600, 16.III.1930, coll. E. L. E. (*N° 3316*) and Cordillera Septentrional, prov. Santiago, El Cenizo, m. 800, 20.II.1930, coll. id. (*N° 3415*). On *P. plumierii* Urb. (id.), Cordillera Central, prov. Santo Domingo, Manielito, 11.II.1930, coll. id.

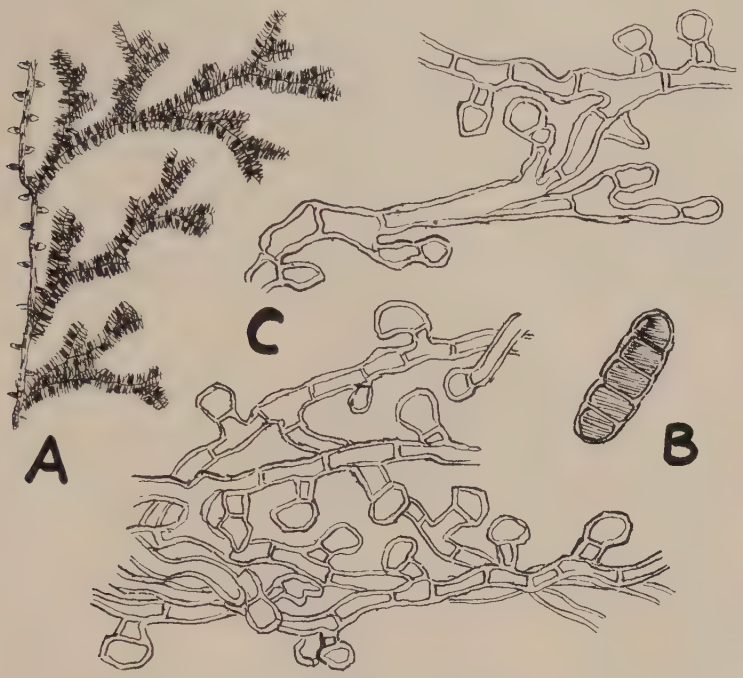

Fig. 73. *Meliola selaginellarum* Cif. *a*) Habitus of the fungus; *b*) Spore; *c*) Mycelium with hyphopodia.

(*N° 3239*). On *Guettarda levis* Urb. (id.), Cordillera Central, prov. La Vega, Bonao, Firme del Banilejo, m. 1050 ca., 16.XII.1930, coll. id. (*N° 4570*). On *Antirrhoea sintenisii* Urb. (id.), Peninsula de Samaná, prov. Samaná, Cabo Cabrón, La Herradura, in forest, 25.V.1930, coll. id. (*N° 4203*).

This species is variable, being frequently and heavily overgrown by fungi, chiefly by Hyphales, as in the *N° 3316, 3319, 3145* and *3300*. On *Antirrhoea* has been determined on the base of morphology of mycelium and hyphopodia, being heavily parasitized and sterile. This species appears to be the glabrous homolog of *M. psychotriae* Earle. See PETRAK and CIFERRI (1930, 1932), CIFERRI (1931, 1933).

224. * MELIOLA (Irenina) SEPULTA Pat. in Stev., Ill. Biol. Mon., Vol. II, pag. 14 (1916).

On *Avicennia nitida* Jacq. (Verbenaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, shores of Río Ozama, 14.XII.1929, coll. E. L. E. (*N° 3348*).

First record outside of Puerto Rico. Black, well defined, circular, single or confluent, sub-epiphyllous spots, 2—5 mm. in diam.; spores slightly longer (to 48) and perithecia smaller (to 250 in diam.) than in the description.

225. MELIOLA SERJANIAE Stev., Ill. Biol. Mon., Vol. II, pag. 44 (1916).

Previously quoted on *Serjania polyphylla* Radlk. and *S. diversifolia*

(Jacq.) Radlk. (Sapindaceae), and frequent on species on the genus *Serjania*, as: Valle del Cibao, prov. Santiago, Santiago, Hato del Jaque, XII. 1930, coll. E. L. E. (on the Phanerogamic specimen *N° H 16509*; probably a new species of the genus *Serjania*); rrom the same locality, 5.III.1931, coll. R. C. (*N° 4590*); as above, 4.IV.1930, coll. id. (*N° 4591*). In the specimen *N° 4590* the setae are also longer (300—750) and the hyphopodia rarely opposite; the spores are 36—40 × 15—18. Observing many specimens, the formulae are variable from 3111.4223 and 3113.4223 to 311$\frac{1}{3}$.4223. See CIFERRI (1938).

226. MELIOLA SERJANIAE Stev. var. DENTATA Stev., Ann. Mycol., Vol. XXVI, pag. 280 (1928).

Previously quoted by CIFERRI (1938) on *Serjania polyphylla* Radlk. (Sapindaceae).

227. MELIOLA (Irenopsis) SEYBOENSIS Cif., Ann. Mycol., Vol. XXXVI, pag. 16 (1938). (Fig. 74).

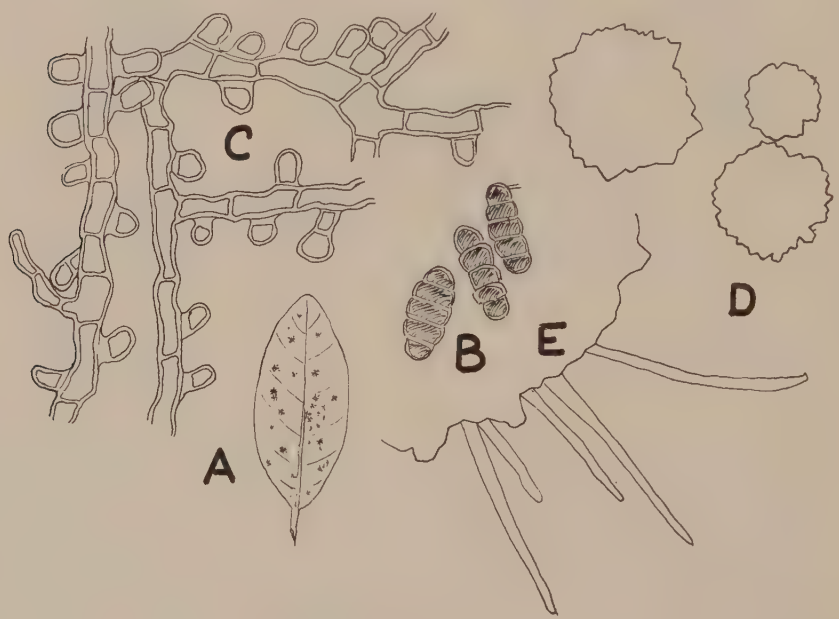

Fig. 74. *Meliola seyboensis* Cif. *a*) Habitus of the fungus; *b*) Spores; *c*) Mycelium with hyphopodia *d*) Sketch of perithecia; *e*) Border of a perithecium with setae.

Quoted by CIFERRI (1938) on *Ximenia americana* L. (Olacaceae). Only one record of this endemic species.

228. * MELIOLA SIMILLIMA Ell. & Ev. in Hitchc., Ann. Rep. Mo. Bot. Gard., Vol. IX, pag. 118 (1898).

On *Rauwolfia nitida* Jacq. (Apocynaceae); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, leg. E. L. E. (*N° 2784*).

First record for Santo Domingo of this intertropical species, found on other genera of the Apocynaceae family. Our specimen agree well with the description. This species is, apparently, a poorly developed form of *M. tabernaemontanae* Speg., recorded on the same host plant in Puerto

Rico, showing capitate hyphopodia more regular in shape, and many morphological elements of slightly smaller size.

229. MELIOLA (Irenopsis) SOLANI Stev., Ill. Biol. Mon., Vol. II, pag. 15 (1916). (Fig. 75).

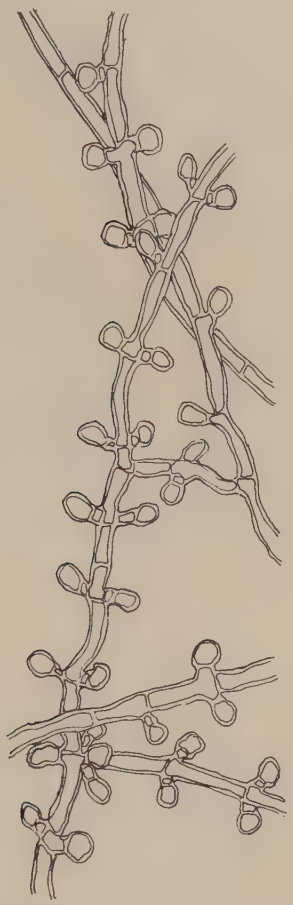

Fig. 75. *Meliola solani* Stev. Mycelium with hyphopodia.

Previously quoted by PETRAK and CIFERRI on *Solanum torvum* Sw. (Solanaceae). New records: on *Solanum torvum* Sw. (id.), Valle del Cibao, prov. Espaillat, Estacion Nacional Agronomica, 16.II.1930, coll. R. C. (*N° 3099*). On *S. jamaicense* Sw. (id.), Llano Costero, prov. Santo Domingo, Guerra, Sabana de Guabatico, 8.VIII.1929, coll. id. (*N° 2715*); on the same host plant, Peninsula de Samaná, prov. Samaná, Samaná, Arroyo Maria Luísa, 50 m. ca., 21.VI.1930, coll. E. I. E. (*N° 4571*).

The specimen *N° 3099* is immature. On the specimen *N° 2715* the perithecia are more or less setose when young, becoming glabrous with the age, confirming the sub-specific taxonomic range of *Irenopsis*. On the specimen *N° 4571* the perithecia are, as a rule, 6-setose, the structure of the setae being peculiar, and intermediary between true setae and vermiform appendages. The color is brown, from light-brown to dull-brown,

but the transparency is almost alabastrine; the tip is obtuse. In the same leaf the fungus is associated with *Cercospora trichophila* Stev. See Toro (1927, under *Irene*).

230. ** MELIOLA SOROCEAE Speg., An. Mus. Nac. Buenos Aires, Vol. XXIII, No 1343 (1912) var. **FICI** Cif., n. var. (Fig. 76).

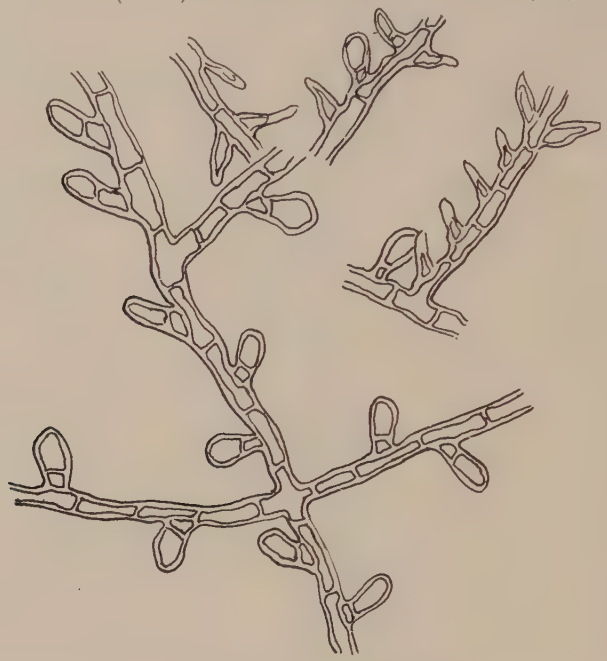

Fig. 76. *Meliola soroceae* Speg. var *fici* Cif. Mycelium with capitate and mucronate hyphopodia

A typo recedit plagulis amphigenis sed minoribus (10—30 mm. diam.) vel hypophyllis, non membranaceis, rarius setulosis; peritheciis minoribus (usque 100 diam.) sporisque etiam minoribus (42—46 × 16—18).

HAB.: in foliis *Fici rubricostae* Warb. (Moraceae), Cordillera Septentrional, prov. Puerto Plata, Loma Isabel de Torres, 16.III.1930, coll. E. L. E. (*N° 3330*).

Formula of the specie: 3131.5332; of the variety: 3131.4211. The shape and size of setae and other morphological elements are very similar to those of the type species; the mucronate hyphopodia are bottle-shaped, irregular, opposite, with an almost obtuse tip, 30—33 in lenght, 6—7,5 in diam. near the base, and 3—3,5 at the tip.

The type species was found in Argentina on *Sorocea* (Moraceae). This variety is clearly distinct from *M. microtricha* Syd. having entire mycelic setae and perithecial setae, as well as from *M. ficuum* Yates having entire setae, both found on *Ficus* spp.

231. MELIOLA (Irene) SORORCULA Speg., Bol. Acad. Nac. Ci., Cordoba, Vol. XI, p. 230 (1889).

Previously quoted by Toro (1927, under *Appendiculella compositarum*) and by Ciferri (1933, 1938) on *Eupatorium odoratum* L. (= *Osmia odorata* (L.) Sch.-Bip.) and *Mikania* spp. (Compositae).

New records: on *Mikania scandens* (L.) Willd. (id.), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 275, 3.III.1930, coll. E. L. E.

(*N° 3216*). On *Eupatorium odoratum* L. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. id. (*N° 2777*); on the same host plant, Cordillera central, prov. La Vega, Jarabacoa, on the road to the falls, 700 m. ca., XI. 1929, coll. id. (*N° ?2535* or *?2591*); on the same host plant, Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 15.III.1930, coll. R. C. (*N° 3278*).

The spores of the specimen *N° 3216* are slightly smaller than in the description. On the specimen *N° 2535* or *2591* the colonies are 1—2 mm. in diam.; mycelium 6—8 thick; capitate hyphopodia with basal cell 4—8 long, head cell pyriform to elongate, never globular; mucronate hyphopodia irregular in shape, not frequent, 14—18 by 10—12 ca.; perithecia 40—70 to 230; spores smoky-brown, 4-septate, somewhat narrowed at the septa, 30—40 by 14—18. The *Meliola* is associated with another undetermined Perisporiacea and with one Microthyriacea. See STEVENS (1917, under *Irene*).

232. * MELIOLA (Irene) SORORCULA Speg., var. PORTORICENSIS Stev., Ill. Biol. Mon., Vol. II, pag. 22 (1916).

On *Eupatorium macrophyllum* L. (Compositae), Cordillera central, prov. Seybo, El Jovero, road to El Liar, 19.VII.1930, coll. E. L. E. (*N° 4593*).

Our specimen agree well with the description, but the vermiform appendages are 18—25 in lenght; the spores are strongly narrowed at the septa, 40—42 by 16—18. This is the first record outside of Puerto Rico.

233. MELIOLA (Irenina) SPHAEROPODA Cif., Ann. Mycol., Vol. XXXVI, pag. 17 (1938). (Fig. 77).

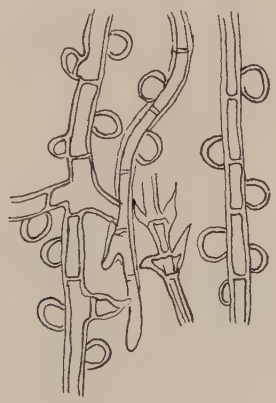

Fig. 77. *Meliola sphaeropoda* Cif. Mycelium with hyphopodia.

Only one record of the species, endemic, on *Wallenia apiculata* Urb. (Myrsinaceae) (*N° 2893*), as quoted by CÍFERRI (1938).

This glabrous *Meliola* is, in many ways, opposite to *M. myriopoda* Cif., living on *Wallenia laurifolia*: in the former the capitate hyphopodia are scarce, and the species is clearly parasitic in nature, with hyphophyllous, colonies, and so on.

234. ** **MELIOLA** (Irenina) **STELLATA** Cif., n. sp. (Fig. 78).

Coloniis nigris, quasi superficialibus, sparsis, isolatis usque confluentibus, plus minusve regulariter orbiculatis, 2—5 mm. in diam., infrequenter majoribus, in pagina superiore foliorum adnatis, mycelio ex hyphis laxis,

parce ramosis, brunneis, septatis composito, 6—8 crasso, ramis opposite insertis, rectis; hyphopodiis capitatis saepe alternantibus vel unilateralibus, rarius oppositis, brunneis, cellula superiore sphaerica vel sphaeroidea, 16—22 × 10—12, rarius irregulari nunquam lobata, cellula basali evidente, 3—6 longa; hyphopodiis mucronatis oppositis, rarius unilateralibus, eodem capitatis simillime evolutis, saepe hyphopodiis capitatis mucro-

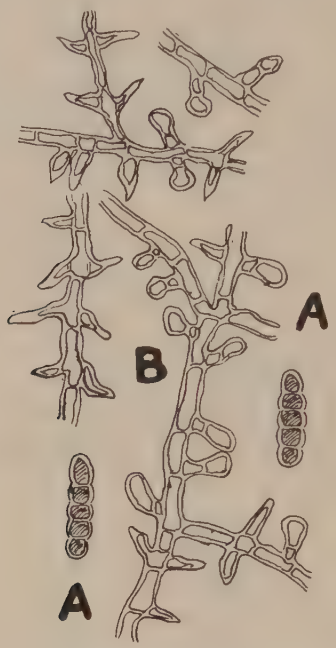

Fig. 78. *Meliola stellata* Cif. *a* Spores; *b*) Mycelium with hyphopodia.

natisque oppositis, ampulliformibus, apicibus rectis usque plus minusque curvatis, 15—19 longis, base 6—8 crassis, apice 4—6 in diam.; setis myceliaribus perithecialibusque carentibus; peritheciis dilute brunneis usque nigris, subimpellucidis usque opacis, appendicis conicis ornatis, usque levibus, sphaericis, leniter depressis, 140—180 diam.; ascis non visis; sporis brunneis, cylindraceis vel subcylindricis usque variabilibus, nunquam regulariter ellipticis, 4-septatis, ad septa leniter constrictis, 40—44 × 11—18.

HAB.: in foliis *Stigmatophylli lingulati* (Poir.) Small (Malpighiaceae), Llano Costero, prov. Santo Domingo, Boca Chica, La Caleta, 10.II.1930, coll. E. L. E. (*N° 3343*, typus; etiam *N° 2757*).

Formula: 3103.4220. A well defined species, clearly distinct from all *Meliolae* of the subgenus *Irenina* found on Malpighiaceae. The type specimen is different from *M.* (Irenina) *glabra* on account of the position of capitate hyphopodia, and for many other characteristics. The specimen *N° 2757*, collected in the same locality and on the same host plant, is slightly different: the capitate hyphopodia are more irregular in shape and greater than in the type, 18—26 in length at all; the basal cell is 6—8 long; the perithecia are always black and opac, and the border is

crenulate; perithecia smaller (115—165 in diam.); spores greater, reaching 50—55 in length.

235. MELIOLA STENOTAPHRI Stev., Ill. Biol. Mon., Vol. II, pag. 41 (1916).

On *Stenotaphrum secundatum* (Walt.) Ok. (Graminaceae). Only one record of the species as quoted by CIFERRI (1933).

236 **MELIOLA (Irenina) STEVENSIANA Cif., n. sp.

Epiphylla; coloniis nigris, definitis, singulis, orbicularibus vel irregularibus, 3—8 mm. diam., saepe 3—6 mm.; mycelio ex hyphis brunneis usque nigridulis, septatis, anastomosantibus, irregulariter ramificatis composito, ramulis irregulariter, saepe angulato-dispositis, 6—8 crasso constituto; hyphopodiis capitatis paucissimis, alternantibus vel unilateralibus, sessilibus, cellula apicali, sphaerica vel ovoidea, 8—12 × 7—9 longa et lata; sine hyphopodiis mucronatis; setis myceliaribus perithecialibusque; peritheciis nigris, sphaericis, depressis, subiculum radiatum gerentibus, 150—170 in diam.; ascis diffluentibus, 2—4-sporis; sporis brunneis, ovatis ellipsoidisque, ad septa leniter constrictis, 32—38 × 13—16.

HAB.: in pagina superiore foliorum *Coccolobae? costatae* Ch. Wright (Polygonaceae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1929, leg. E. L. E. (*N° 2914*).

The formula of this species is: 3101.3220. This is the first *Meliola* of the subgenus *Irenina* found on members of the Polygonaceae family. In many ways it appears to be a primitive or rudimentary species, for the shape of capitate hyphopodia, the scarce number (and many segments of the mycelium are lacking of hyphopodia), the absence of mucronate hyphopodia, the absence of setae and so on, so that this species is, in part, allied to the genus *Meliolina*. According the STEVENS' key of the subgenus, it falls near **MELIOLA** (Irenina) **COLUBRINAE** (Stev.) Cif., n. comb. (Syn. *Irenina colubrinae* Stev.) and **MELIOLA** (Irenina) **MORMINAE** (Stev.) Cif., n. comb. (Syn. *Irenina morminae* Stev.), respectively found on members of Rhamnaceae and Polygalaceae. Of course, the new species is distinct from both.

Named in honour of the late Dr. F. L. STEVENS, specialist of the group of Meliolineae.

237 **MELIOLA (Irenina) STEVENSONII Cif., n. sp.

Epiphylla; coloniis nigris, superficialibus, irregularibus usque rotundatis, in sicco sub-indistinctis, 1—2,5 mm. diam., pro more singulis; mycelio ex hyphis fuscis, septatis, irregulariter ramosis, oppositis vel non, 6—8 crassis; hyphopodiis capitatis modice frequentibus, cellula apicali sphaerica, cylindracea usque irregulari, saepe plurilobata, oppositis vel unilateralibus, 15—22 × 11—19, cellula basali 3,5—5 longa; hyphopodiis mucronatis regulariter ampulliformibus, oppositis, paucis, cum hyphopodiis capitatis intermixtis, basi incrassata, apice acutato, 17—20 × 5—9; setis myceliaribus perithecialibusque carentibus; peritheciis nigris, globosis, depressis, irregulariter lobatis, 110—120 diam.; ascis non visis; sporis ellipsoideis vel ovatis, ad septa non vel leniter constrictis, apicibus rotundatis vel sub-rotundatis, brunneis, constrictis, parte centrali crassiore, 32—35 × 11—13.

HAB.: in pagina superiore foliorum *Exotheae panniculatae* (Juss.) Radlk. (Sapindaceae), Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 27.II.1930, coll. E. L. E. (*N° ?3120*).

The formula of the species is: 3101.3220. The only glabrous *Meliolae* with alternate hyphopodia found are *M. glabra* Berk. et Curt. and *M.*

glabroides Stev., both found on members of different families, in addition to Sapindaceae (*Hypelate* for the first species, and *Cupania* for the second) both are different from our species. Apparently this is the first *Meliola* found in *Exothea*.

The species is named in honour to Dr. J. A. Stevensons, North American leading mycologist, and student of West Indian fungi.

238. MELIOLA STUHLMANIANA P. Henn., in Engl., Botan. Jahrb., Vol. XXXIV, pag. 45 (1904).

Quoted by Toro (1927) on *Byrsonima crassifolia* H.B.K. (Malpighiaceae). To be probably referred to *M. byrsonimae* Stev.

239. MELIOLA SUBSTENOSPORA v. Höhn., Sitz. K. Akad. Wien, Math.-Naturkl., Vol. CXVIII, pag. 317 (1909).

On *Uniola virgata* (Poir.) Griseb. (Graminaceae), previously quoted by Ciferri (1933) and the only record for Santo Domingo.

240. MELIOLA SWIETENIAE Cif., Ann. Mycol., Vol. XXXI, pag. 153 (1933). (Fig. 79).

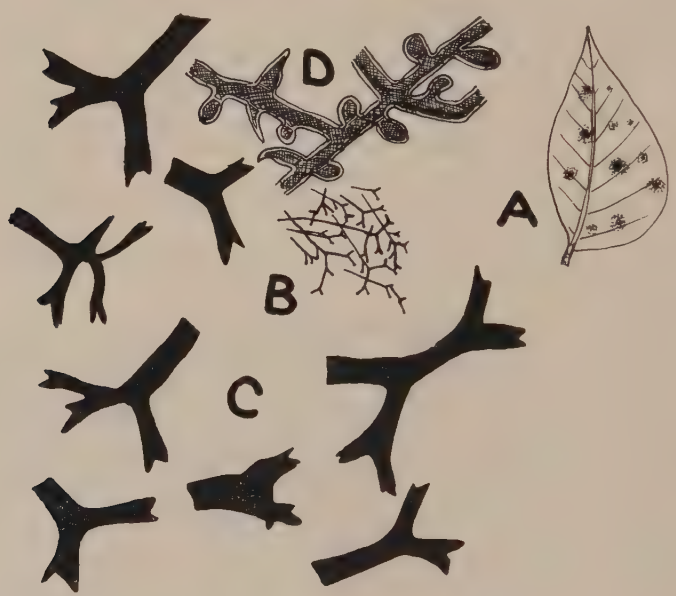

Fig. 79. *Meliola swieteniae* Cif. *a*) Habitus of the fungus; *b*) Sketch of the setae; *c*) Tips of the setae; *d*) Mycelium with hyphopodia.

On *Swietenia mahogani* (L.) Jacq. (Meliaceae). Previously quoted by Ciferri. New record on the same host plant: Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 14.XII.1929, leg. E.L.E. (*N° 2739*).

The new specimen (parasitized by *Acremoniella melioliphila* Cif.) agree well with the type of this endemic, rare species. See CIFERRI (1933).

241. MELIOLA TABERNAEMONTANAE Speg., An. Mus. Nac. Buenos Aires, Vol. XXIII, No 1345 (1922).

On *Tabernaemontana citrifolia* L., *Rauwolfia nitida* Jacq. and *R. tetraphylla* L. (Apocynaceae), as quoted by CIFERRI and FRAGOSO (1927), PETRAK and CIFERRI (1930), TORO (1927) and CIFERRI (1931, 1933).

New record: on *Plumiera pluvialis* Urb. et Ekm. (id.), Cordillera Central, prov. Santo Domingo, Villa Altagracia, Loma Marián Chicle, 800 m. ca., 6.I.1930, coll. E. L. E. (*N° 2906*). On *Rauwolfia nitida* Jacq. (id.), Cordillera Central, prov. Santo Domingo, Villa Altagracia, coll. id., 12.II.1930 (*N° 3227* and *3231*). On *Tabernaemontana citrifolia* L. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama coll. id., 15.XII.1929 (*N° 2813*).

The specimen *N° 3231* has been collected only on branches and petioles of the host plant, never on leaves; in spite of this exceptional localization, the fungus agree well with the species, but the perithecial setae are more abundant than in the specimen on leaves.

242. MELIOLA TECOMAE Stev., Ill. Biol. Mon., Vol. II, pag. 53 (1916).

On Bignoniacea indet. (? *Tabebuia* sp.), as quoted by TORO. A doubtful record. See CIFERRI and FRAGOSO (1926 on ? *Tecoma* sp.)

243. MELIOLA TEHONIANA Trotter in Sacc., Syll. Fung., Vol. XXIV, pag. 276 (1926).

Syn.: *Meliola* (Irenopsis) *conferta* Teh., Bot. Gaz., Vol. LXVII, pag. 502 (1919), non Dodge.

On *Rhacoma crossopetalum* L. (Celastraceae), as quoted by CIFERRI. New record on the same host plant (= *Crossopetalum pallens* (Sm.) Ktze.): Cordillera Septentrional, prov. Puerto Plata, Sosúa, coral reef, 20.III.1930, coll. E L. E. (*N° 3610*). This specimen agree well with the diagnose of TEHON'S species.

In the STEVENS' monograph (Ann. Mycol., Vol. XXV, pag. 434. 1927), *M.* (Irenopsis) *conferta* Tehon (now *M. tehoniana* Trotter) has been indicated on *Rhacoma* (*Leuzea*) of the Compositae family, and *M.* (Irenopsis) *compacta* Earle (ibid.) on *Crossopetalum* of the Celastraceae family, but according SEAVER and CHARDON (Scientific Surv. Puerto Rico and Virg. Isl., Vol. VIII, p. I, pag. 32. 1926) both the species are found on *Rhacoma*, and endemic of Puerto Rico.

244. MELIOLA (Irenopsis) TENUISSIMA Stev., Ill. Biol. Mon., Vol. II, pag. 492 (1916).

On *Gouania polygama* (Jacq.) Urb. (Rhamnaceae) as quoted by TORO. New record on the same host plant: Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 5.XII.1929, coll. R. C. & E. L. E. (*N° 2810*). On *G. lupuloides* (L.) Urb., (id.), Valle del Cibao, prov. Santiago, Hato del Yaque, m. 150, 15.II.1930, coll. R. C. (*N° 3022*).

An interesting Central American and West Indian species. While the microscopical characteristics of the fungus on both species of *Gouania* are clearly allied, the macroscopic aspect and, probably, the biological characteistics are well distinct. On *G. polygama* the fungus is parasitic on leaves, judging from the yellowish to decolorized halo surrounding the

colonies; this halo is clearly visible on the upper surface of the leaf. On *G. lupuloides* the fungus is apparently only epiphytic. The only microscopical difference is that the fungus on *G. lupuloides* is more setose than the same on *G. polygama*. See TORO (1927).

245. MELIOLA TERAMNI H. et P. Syd., Ann. Mycol., Vol. XV, pag. 193 (1917). (Fig. 80).

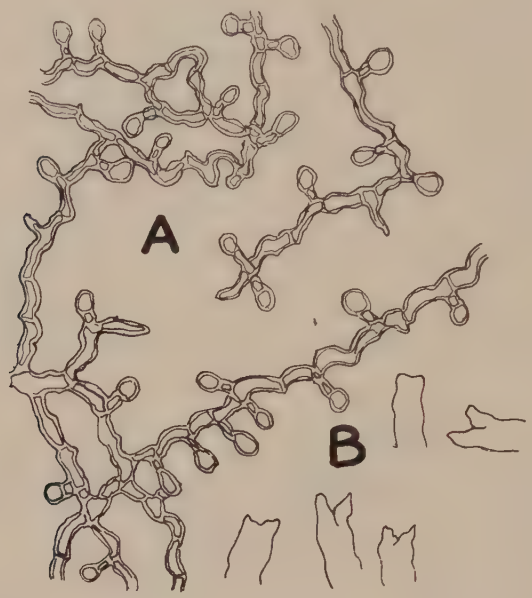

Fig. 80. *Meliola teramni* H. et P, Syd. *a*) Mycelium with hyphopodia. *b*) Tips of the setae.

On *Teramnus uncinatus* (L.) Sw. (Leguminosae), as quoted by CIFERRI (1933). New record on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, m. 50 ca., 16.II.1930, coll. R. C. (*N° 3088*). The setae are abundant, 550—620 in lenght, thickened at the base (11—14 in thickness); capitate hyphopodia 17—20 long at all, with the head cell 12—14 in length; the setae are, as a rule, entire and obtuse, very rarely shortly furcate at the tip; capitate hyphopodia frequently opposite; spores 30—40 by 14—15. On *Desmodium incanum* Ekman (= ? *D. canescens* (L.) DC.) (id.), Valle de Azua, prov. Azua, S. Juan de la Maguana, in field, 8.VIII.1929, coll. R. C. (*N° 2727*), a new host plant for the species. This specimen is allied to the *N° 3088*, but with the capitate hyphopodia of 16—18 long at all, head cell 11—13 by 10, as a rule alternate, rarely unilateral or opposite. The setae are rarely truncate, as a rule obtuse, 300 long, with the base 10—11 in thickness; the spores are 42—44 by 14—16.

246. MELIOLA (Irenina) TERSA Cif., Ann. Mycol., Vol. XXXVI, pag. 18 (1938). (Fig. 81).

On *Cupania americana* L. (Sapindaceae), as quoted by CIFERRI (1938). Only one record of this rare, endemic species.

247. MELIOLA THOUINIAE Earle, Bull. New York Bot. Gard., Vol. III, pag. 308 (1916).

On *Thouinia trifoliata* Poir. (Sapindaceae) as quoted by CIFERRI. On *Allophylus crassinervia* Radlk. (id.), Cordillera de Neyba, prov. Azua, San Juan de la Maguana, El Cerrado, m. 700, VIII. 1929, coll. E. L. E. (*N° 2851*). The specimen agree well with the species. See CIFERRI (1933).

248. MELIOLA TONDUZI Speg., Bol. Acad. Nac. Ci., Cordoba, Vol. XXIII, pag. 190 (1919).

On *Xylosma buxifolium* A. Gray (Flacourtiaceae), as quoted by CIFERRI. New records on the same host plant: Llano Costero, prov. Santo Domingo, Ciudad Trujillo, Haina, at Río Jaina, 6.VI.1926, coll. R. C. & E. L. E. (without number); as above, banks of Río Ozama, 15.XII.1929, coll. id.

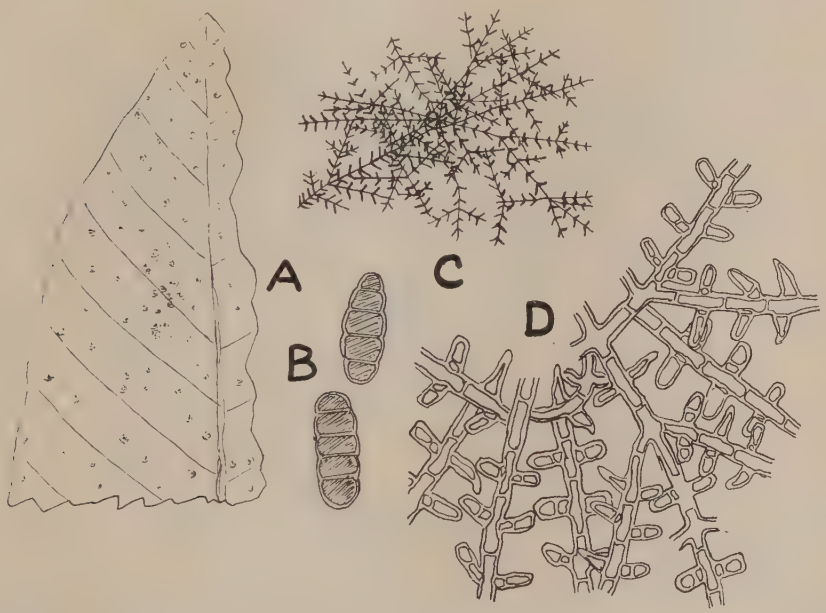

Fig. 81. *Meliola tersa* Cif. *a*) Habitus of the fungus; *b*) Spores; *c*) Sketch of the mycelium; *d*) Mycelium with hyphopodia.

(*N° 2767*). Both specimens agree well with the description of this Central American species. See CIFERRI (1933).

249. MELIOLA (Irene) TONKINENSIS Kart. et Roum., Rev. Mycol., Vol. XII, pag. 77 (1892).

On *Cecropia peltata* L. (Moraceae), as quoted by TORO (1927). Should be referred to the variety *cecropiae* Stev. of the same species (see below).

250. MELIOLA (Irene) TONKINENSIS Karst. et Roum., Rev. Mycol., Vol. XII, pag. 77 (1890) var. CECROPIAE Stev., Ann. Mycol., Vol. XXV, pag. 427 (1927).

On *Cecropia peltata* L. (Moraceae); see above. Quoted by TORO (1927) under the binomial *Appendiculella tonkinensis* (Karst. et Roum.) TORO, and by CIFERRI under the correct binomial. New record: Llano Costero,

prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. R. C. & E. L. E. (*N° 2795*). The specimen is parasitized by *Acremoniella melioliphila* Cif.

251. MELIOLA (Irene) TONKINENSIS Karst. et Roum., Rev. Mycol., Vol. XII, pag. 77 (1890) var. POTOMORPHES Cif., Ann. Mycol., Vol. XXXI, pag. 149 (1933).

On *Potomorphe umbellata* (L.) Miq. (= *Piper umbellatum* L.) (Piperaceae). New records of this endemic variety on the same host plant: Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, in field, 6.II.1930, coll. R. C. (*N° 2070*); as above, Cordillera Septentrional, prov. Puerto Plata, Las Majaguas, 600 m., 14.II.1930, coll. E. L. E. (*N° 3026*). See CIFERRI (1933).

252. ** **MELIOLA** (Irenina) **TONSA** Cif., n. sp. (Fig. 82).

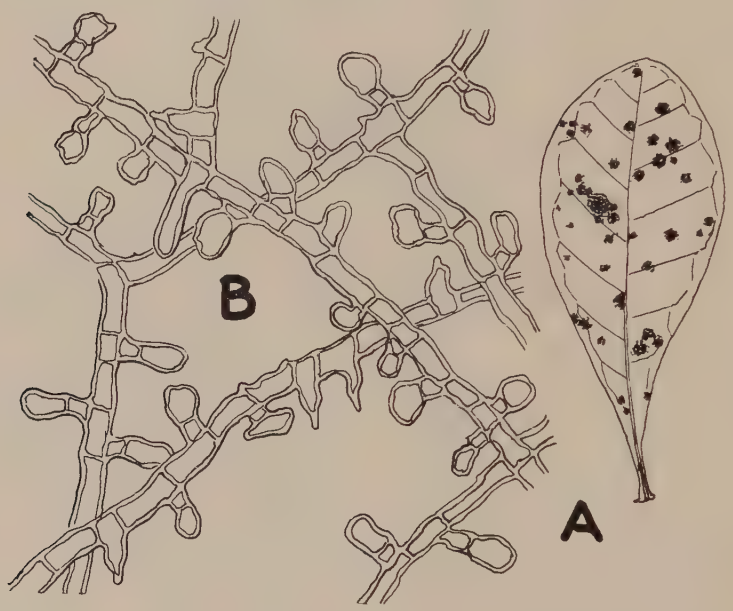

Fig. 82. *Meliola tonsa* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia.

Coloniis nigris, plus minusve isolatis, sub-superficialibus, orbicularibus usque sub-irregularibus, demum sub-confluentibus, quasi crustosis, 1,5—3 mm. diam., pro more 2—2,5 mm., consuete epiphyllis, rarius hyphophyllis mycelio fusco-brunneo usque nigridulo, ex hyphis oppositis sed irregulariter ramosis, rectis vel leviter angulosis, septatis, 9—11 crassis, composito; hyphopodiis capitatis alternantibus vel unilateralibus, dilute brunneis, 10—20 distantibus, abundantibus, 18—25 longis, variabilibus, cellula apicali sphaeroidea vel ovata, oblonga aut irregulari, etiam anthrorsa, distincte angulato-lobata, sed non incisa vel anfracta, 9—11 diam. vel 14—18 × 8—11, cellula basali plus minusve evidente, brevi, 4—7,5 longa, pro more obscuriorae; hyphopodiis mucronatis irregulariter ampulliformibus usque conicis, paucis, isolatis, 14—18 longis. 9 basaliter crassis, 3,5 apicaliter crassis; setis perithecialibus et myceliaribus carentibus; peritheciis paucis, isolatis, nigris, sphaericis, levibus, plus minusve distincte celluloso-reticulatis, 72—120 diam., non rarius cuum disco radiato

basali; ascis non visis; ascosporis fusco-brunneis vel brunneo-nigridulis, 36—40 × 19—22, 4-septatis, non vel leviter ad septa constrictis, consuete cilindraceis, rarius ellipsoideis vel ovoideis, apicibus rotundatis.

HAB.: in foliis *Pachyrae emarginatae* A. Rich. (Bombacaceae), Cordillera Central, prov. Samaná, Los Haitises, Boca del Infierno, 26.VI.1930, leg. E. L. E. (without number).

Formula: 3101.3320. Apparently this is the first Meliolinea described on the Bombacaceae family. A nice species, with hyphopodia lighter than mycelic hyphae, capitate hyphopodia one to each mycelic cell, very irregular mucronate hyphopodia, smooth perithecium.

253. MELIOLA TOROANA Cif., Ann. Mycol., Vol. XXXVI, pag. 18 (1938). (Fig. 83).

Fig. 83. *Meliola toroana* Cif. Mycelium with hyphopodia.

On *Schaefferia frutescens* Jacq. (Celastraceae), as quoted by Ciferri (1938). New records: Cordillera Septentrional, prov. Puerto Plata, Sosúa, 20.III.1930, coll. R. C. (*N° 3336*); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, La Caleta, 10.II.1930, coll. id. (*N° 3288*).

Characteristics of the species: black spots, single of confluent, crustose, dense, 0,5—2 mm. diam., orbicular or irregular in shape, found on the upper page of the leaf; mycelium densely branched, with opposite or alternate hyphae, brown, septate, 5,5—7 in thickness; capitata hyphopodia abundant, very densely aggregeted, also forming a continuous series, opposite or alternate, head cell irregularly angled up to plurilobed, 15—22 by 13—16, without basal cell or stipitate, with the base 6—7 in length; mucronata hyphopodia not observed; without setae; perithecia black, globoso-depresse, tuberculate with conic tubercles, 200—300 in diam.; asci not observed; spores ellipsoid, slightly curved, 4-septate, brown, slightly narrowed at the septa, 46—50 by 19—22.

254. MELIOLA (Irenopsis) TORTUOSA Wint. in Gaillard, Le Genre Mel., pag. 67 (1892).

On *Potomorphe peltata* (L.) Miq. (= *Piper peltatum* L.) (Piperaceae), as quoted by Toro (1927). New records: on *Piper marginatum* Jacq. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama 15.XII.1929, coll. E. L. E. (*N° 2814*). This specimen appears to be allied

to the specimen found on British Guiana by STEVENS (Ann. Mycol., Vol. XXV, pag. 438. 1927).

255. MELIOLA (Irenina) TORULIPES Cif., Ann. Mycol., Vol. XXXVI, pag. 18 (1938). (Fig. 84).

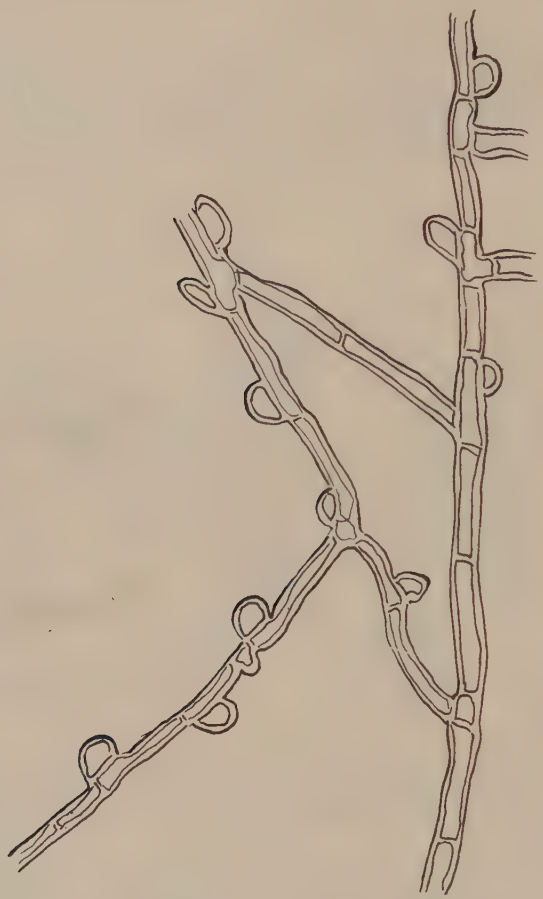

Fig. 84. *Meliola torulipes* Cif. Mycelium with hyphopodia.

On *Hippocratea volubilis* L. (Hippocrateaceae). New records on the same host plant: Cordillera Septentrional, prov. Puerto Plata, Sosúa, coastal forest, 30.III.1930, coll. R. C. (*N° 3338*); Llano Costero, prov. Santo Domingo, Ciudad Trujillo, La Caleta, near the road to Boca Chica, 0—10 m., 10.II.1930, coll. id. (*N° 3123*). The above quoted specimens agree with the description made by ourselves. The formula of the species is: 3101.3210. See CIFERRI (1938).

256. MELIOLA (Chaetomeliola) TRICHOCARPA Cif., Ann. Mycol., Vol. XXXVI, pag. 19 (1938). (Fig. 85).

On *Casearia iliciifolia* (Sw.) Went. (Flacourtiaceae). Only one record of the rare, endemic species. See CIFERRI (1938).

257. MELIOLA TRIFURCATA Cif., Ann. Mycol., Vol. XXXVI, pag. 19 (1938).

On *Carapa guianensis* Aubl. (Meliaceae). Only one record of this rare, endemic species, which formula is: 3133.2344. The setae are typically trifurcate, and this is the most distinctive characteristic as regard to the species described on the same family. The species is different from the allied species *M. opposita* Syd. See CIFERRI (1938).

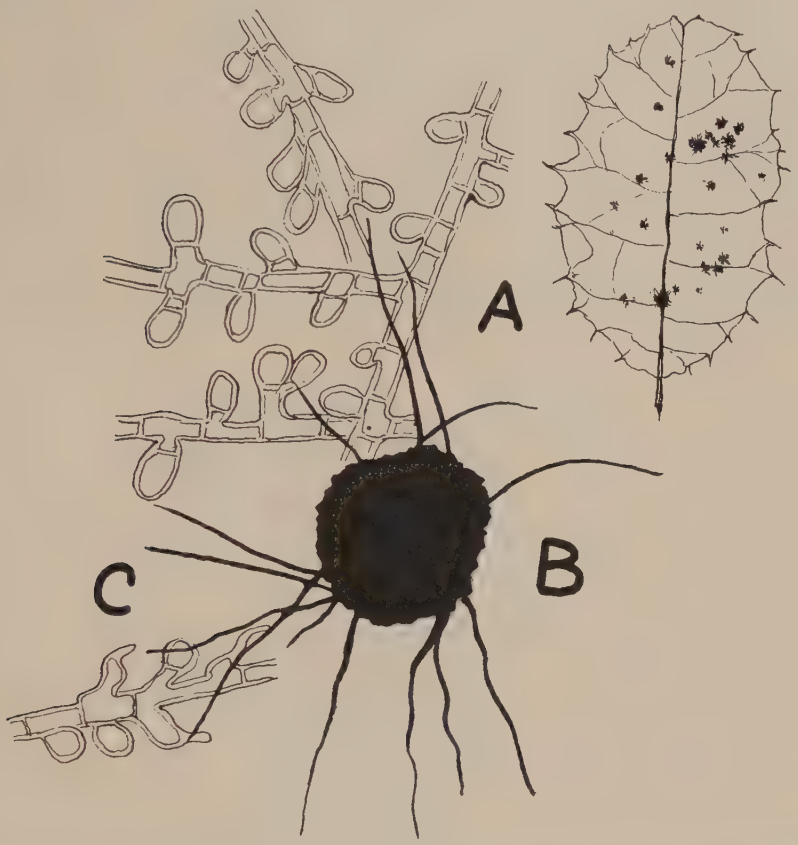

Fig. 85. *Meliola trichocarpa* Cif. *a*) Habitus of the fungus; *b*) Mycelium with hyphopodia; *c*) A perithecium with the setae.

258. MELIOLA TRILOBA Wint., Hedw., Vol. XXV, pag. 95 (1886).
On *Pilea parietaria* (L.) Blume (Urticaceae). See CIFERRI (1933); as a rule, quoted under *Irenina*. Only one record of this intertropical species for Santo Domingo.

259. MELIOLA TRIUMFETTAE Stev., Ill. Biol. Mon., Vol. II, pag. 499 (1916).
On *Triumfetta semitriloba* Jacq. (Malvaceae), as quoted by TORO (1927): see *M. coronata* var. *triumfettae* Stev. One specimen (Valle del Cibao, prov. Santiago, Santiago, Hato del Jaque, 16.VI.1931, coll. R. C., *N° 3849*) is parasitized by *Cicinnobella* sp.

260. ** **MELIOLA** (Irenina) **TURNERACEARUM** Cif., n. sp.
Hypophylla, quasi parasitica, maculas decoloratas virido-albas, effusas, 2 mm. ca. diam. efformants; coloniis punctiformibus, nigris, 0,5—1 mm. diam., in pagina superiore foliorum gerentibus; mycelio ex hyphis fusco-

brunneis, septatis, parce ramosis, rudimentalibus, 3—5 diam. efformato; hyphopodiis capitatis paucis, isolatis, alternantibus vel unilateralibus, brunneis, capitulo sphaeroideo usque ovato vel ellipsoideo, 8—12 × 6—9, cellula basali 3—5 longa; hyphopodiis mucronatis, setis myceliaribus perithecialibusque carentibus; perithecia pauca, nigra, depressa, sphaeroidea, glabriuscula, 40—65 diam.; ascis diffluentibus, 1—2-sporis, clavato-oblongis; sporis brunneis, ellipticis vel ovoideis, apicibus rotundatis, 4-septatis, ad septa non vel leniter constrictis, 16—22 × 9—14.

HAB.: in foliis *Turnerae ulmifoliae* L. (Turneraceae), Valle del Cibao, prov. Santiago, Hato de Yaque, 7.IV.1931, coll. R. C. (sine numero).

Formula of the specie: 3101.2210. It appears to be the first Meliolinea found on Turneraceae family. In many way it appears to be distinct from other species of the subgenus *Irenina*, on account of the apparent primitiveness of the morphology. The species is clearly parasitic on leaves, and the colonies are inconspicuous, so that the species is easily overlocked. Found only once on a poor specimen.

261. * MELIOLA ULEANA Pazschke in Gaillard, Le Gen. Mel. 90 (1892). (Fig. 86).

Fig. 86. *Meliola uleana* Pazschke. Mycelium with hyphopodia.

On *Scleria cubensis* A. Rich. (Cyperaceae), Valle del Cibao, prov. La Vega, Rincón, 5.VIII.1927, coll. R. C. (without number); on *Rhynchospora corymbosa* (L.) Britt. (id.), Valle del Cibao, prov. La Vega, La Vega

toward Rincón, in swamp, 17.IV.1930, coll. E. L. E. (*N° 4181*); on *R. distans* (Michx.) Vahl. (id.), as above, Sabana de Pontón, the same date and collector (*N° 4182*).

A new species for Santo Domingo and probably for the West Indies. On *Scleria* the determination is doubtful, the specimen being not fructified, and heavily parasitized by fungi. It has been determined on the base of the shape and size of capitate hyphopodia, truncate as in the figure of GAILLARD, but also spheric-lobate and lenghtened; stalk cell long. The outstanding characteristic of the spore morphology were not, of course, observed. On *R. corymbosa* the *Meliola* is parasitized by a species of the genus *Trichothyrium*: capitate hyphopodia alternate (exceptionally opposite), sinuato-lobate, with very few, scanty mycelic setae, obtuse, 290—675 in lenght; spores dark-brown, 48—50 × 16—18, but fructifica-

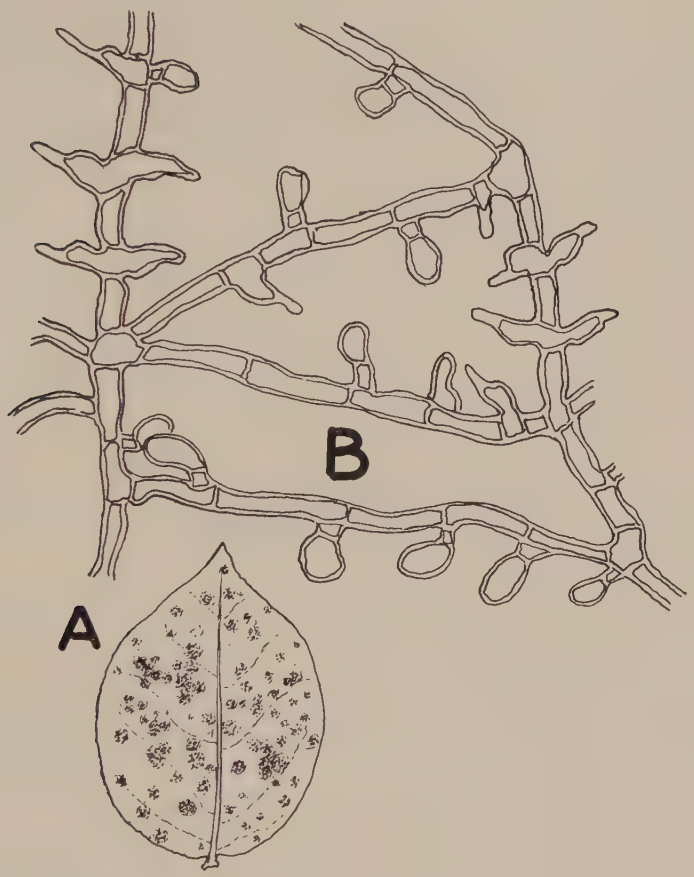

Fig. 87. *Meliola verrucosa* Pat. var. *pedilanthi* Cif. *a*) Habitus of the fungus; *b*) Mycelium with capitate hyphopodia.

tions very poor The formula of the species on this specimen is: 3111. 4233, while the formula of the species is 3111.4232: probably the morphology has been modified by the parasitism. On *R. distans* the species is quite typical: setae acute, 290—500 in length; perithecia 220—300 in diam.; spores of variable shape, with tip from acute to rounded, broad or thin, as a rule 34—36 × 11—15.

262. ** MELIOLA (Irenina) VERRUCOSA Pat., Journ. Botanique, Vol. XI, pag. 343 (1897). var. **PEDILANTHI** Cif., n. var. (Fig. 87).

Coloniis epiphyllis, sparsis vel confluentibus, griseolis vel nigridulis, 2—6 mm. diam.; mycelio obscure brunneo, ex hyphis laxis, parum ramosis, parum septatis composito; hyphopodiis capitatis scarsis, variabilibus, 21—32 longis, cellula apicali ovata, oblonga, elliptico-truncata, rarius sphaeroidea vel sub-angulata, 18—25 × 12—17, cellula basali abbreviata, 4—7 longa; hyphopodia mucronata rara, variabilia, conica usque ampulliformia, base inflata, apice abbreviato et subacuminato, 9—11 × 7—8; perithecia 60—80 diam., distincte cellularia, verruculis conicis obtecta; sporis ut in typo, 40—42 × 16—18.

HAB.: in foliis *Pedilanthi latifolii* Millsp. et Britt. (Euphorbiaceae), Peninsula de Samaná, prov. Samaná, Río San Juan, 3.V.1930, coll. E. L. E. (*N° 4177*).

Formula of this variety: 3101.4210. Colonies as a rule found on the upper surface of the leaves, adherent, sub-radiate to sub-crustose, 2—6 mm. diam., sparse and scattered or sub-confluent, not rarely confluent at all, grayish to gray-blackish, mycelium dark-brown, composed of loose, sparingly branched hyphae, which segments are 21—34 long., scarcely septate; capitate hyphopodia one to each cell, not abundant, 21—32 long., variable in shape and size, head cell ovate, oblong or elliptic-truncate, rarely spheroidal, rarely also sub-angulate but never lobed, 18—25 by 12—17, basal cell short and not evident, 4—7; mucronate hyphopodia not frequent, opposite or alternate, of very variable shape, from conic to bottle-shaped, with a very inflated base and a small, short, sub-acuminate tip, not very different to some shape of the capitate hyphopodia, 9—11 by 7—8; perithecia small (60—80 in diam.), distinctly cellular, with thick, well prononced conic protuberances; spores 40—42 by 16—18.

This variety is different from the type, according the description of the latter, in many ways, from the aspect of the colony to the shape of mucronate hyphopodia. It is not related to *M.* (Irenina) *alchorneae* Stev. et Teh. and *M.* (Irenina) *subapoda* Syd., both found on members of the Euphorbiaceae family.

263. * MELIOLA VICINA H. Syd., Ann. Mycol., Vol. XXI, pag. 95 (1923).

On *Randia parvifolia* Lam. (Rubiaceae), Llano Costero, prov. Santo Domingo, Manuelito, 12.II.1930, leg. E. L. E. (*N° 3132*).

A new species for Santo Domingo, and apparently the first record outside of the type locality. The characteristics of our specimen agree better with *M. vicina* than with *M. psychotriae* Earle, the last species being recorded on *Randia* in Puerto Rico. Of course, both species are clearly related.

264. MELIOLA (Irenina) VILIS H. et P. Syd., Leafl. Philippine Bot., Vol. VI, pag. 1926 (1913).

Quoted by Toro (under *Irene*) on *Citharexylon fruticosum* L. (Verbenaceae) and by Ciferri (1938) on the same host plant.

New records: on the same host plant, Valle del Cibao, prov. Espaillat, Moca, Estación Nacional Agronomica, 16.II.1930 (*N° 3265*); Llano Costero, prov. Santo Domingo, Manielito, 11.II.1930 (*N° 3136*); Cordillera Septentrional, prov. Santiago, El Cenizo, 800 m., 20.II.1930 (*N° 3146*), all collected by E. L. E. On *Cornutia pyramidata* L. (id.), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. id. (*N° 2825*). On *Stachytarpheta cayennensis* (L. C. Rich.) Vahl. (id.)

Llano Costero, prov. Santo Domingo, Manielito, 12.II.1930, coll. id. (*N° 3131*) (smaller perithecia).

The species (formula 3101.3220) is evidently allied to *M.* (Irenina) *longipoda* Gaill. (formula 3101.5330), both tipically found on members of the Verbenaceae family, differing chiefly for the shorter spores, shorter capitate hyphopodia, and more diffuse colonies. Really, a number of specimens are intermediary between both species, so that is not easy to refer to one or other species; e.g., on *Stachytarpheta cayennensis* (Cordillera Central, prov. Samaná, Sabana de la Mar, El Valle, 11.VII. 1930, coll. E. L. E. *N° 4197*) the attribution is doubtfull, but the specimen is parasitized by *Helminthosporium.*

On *Citharexylon* the spores are 41—45 by 16—19, and the characteristics of the colonies as well as of capitata hyphopodia are quite variable. Also on *Stachytarpheta* the capitate hyphopodia are variable from ovate or obtuse-ovate to irregularly sinuate or anfract.

Cornutia appears to be a new genus of host plant for this species.

265. MELIOLA WISMARENSIS Stev., Ann. Mycol., Vol. XXVI, pag. 191 (1928) var. ANTILLANA Cif., Ann. Mycol., Vol. XXXVI, pag. 20 (1938). (Fig. 88).

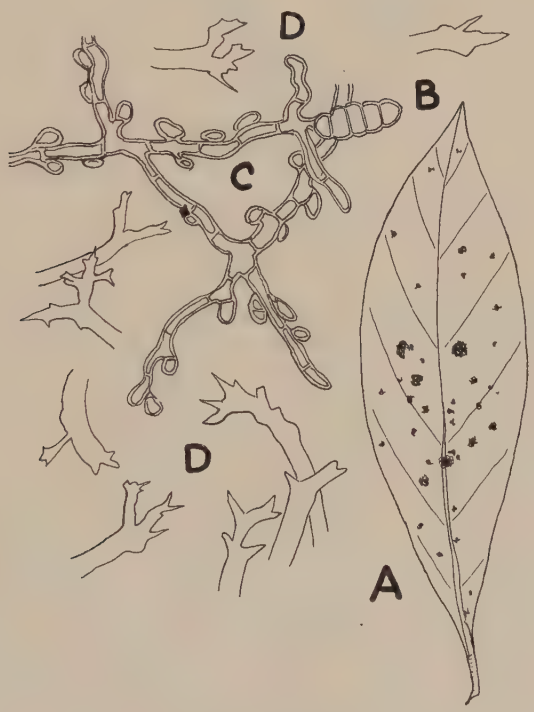

Fig. 88. *Meliola wismarensis* Stev. var. *antillana* Cif. *a*) Habitus of the fungus; *b*) Spore; *c*) Mycelium with hyphopodia; *d*) Tips of the setae.

Quoted by CIFERRI (1938) on *Solanum antillanum* O. E. Schulz (Solanaceae). An endemic variety.

266. MELIOLA WOODIANA Sacc. & Syd., Hedwigia, Vol. XXXVIII, pag. 132 (1899).

On *Guajacum officinale* L. (Zygophyllaceae), as quoted by PETRAK and CIFERRI (1930) and TORO, but referred, in the present contribution, to *M. capilligera* Cif. See TORO (1927).

267. * MELIOLA (Irenina) WRIGHTII Berk. & Curt., In Berk. Journ. Linn. Soc., Vol. X, pag. 392 (1869). (Fig. 89).

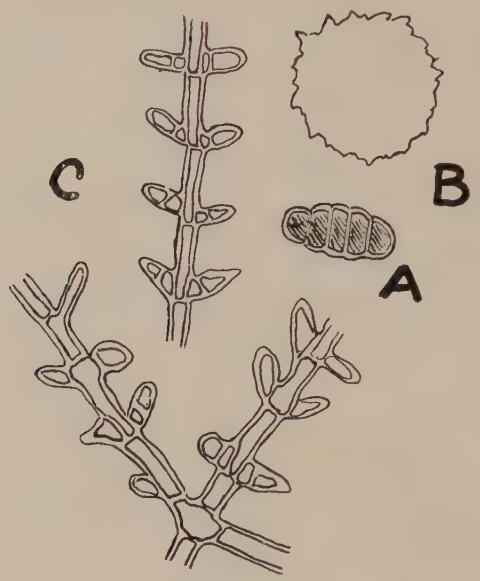

Fig. 89. *Meliola wrightii* Berk. et Curt *a*) Spore; *b*) Perithecium; *c*) Mycelium with hyphopodia.

On *Cupania americana* L. (Sapindaceae), Cordillera Septentrional, prov. Puerto Plata, Loma Isabel de Torrez, m. 650, 16.III.1930 (*N° 3329*); as above, prov. Santiago, Loma Diego de Ocampo, m. 600, VII. 1929 (*N° 2440*), both collected by E. L. E.

On the specimen *N° 2440* opposite capitate hyphopodia are present, but rare. The specimen *N° 3329* is slightly different, the formula being 3102.4330. The spot are black, as a rule isolate, irregular, frequently on the upper side of the leaves, 1—2,5 mm. in diam.; mycelium branched to a right angle to obtuse, 5,5—7,5 in thickness; capitate hyphopodia simple, opposite, rarely unilateral, never alternate, cylindric to sub-elliptic, uniform, very abundant, 5—6 apart, head cell 18,5—26 by 7,5—11, basal cell 3,5—5,5 in lenght; mucronate hyphopodia not abundant, irregularly bottle-shaped to sub-rostrate, 15—22 in lenght, 7 broad at the base, 3,5 at the tip; perithecia black, depresse, almost smooth, with a very incise border, 240—290 in diam.; spores elliptic to ovoid, 4-septate, slightly narrowed at the septa, 42—47 by 26—30.

A South American and Cuban species, new to Santo Domingo.

268. * MELIOLA XYLOSMAE Stev., Ann. Mycol., Vol. XXVI, pag. 256 (1928).

On *Xylosma buxifolium* A. Gray (Flacourtiaceae), Llano Costero, prov. Santo Domingo, Estación Agronomica de Haina, 7.XI.1925, coll. R. C. (*N° 126*).

A species new to Santo Domingo. The capitate hyphopodia are peculiar for this species, which formula is: 3111.2221. The spore are 25—30 by 10—13.

269. MELIOLA YAQUENSIS Petr. et Cif., Ann. Mycol., Vol. XXX, pag. 202 (1932).

On *Wallenia* sp. (Myrsinaceae). Only one record.

Undetermined species

Glabrous Meliolinea, with fragments of the mycelium, mixed with mycelium and immature thyriothecia of a Microthyriacea, on *Alchornea latifolia* Sw. (Euphorbiaceae), Cordillera Central, prov. Santo Domingo, La Cumbre, m. 300 ca., 3.III.1930, coll. E. L. E. (*N° 3252*).

Sterile Meliolinea with capitate hyphopodia almost spherical, without basal cell, 7,5—9 or 7—9 by 8—11, on *Blechum pyramidatum* (Lam.) Urb. (Acanthaceae) (*N° 3139*); on the same host plant, Llano Costero, prov. Santo Domingo, Ciudad Trujillo, in ruderatis, 18.XII.1929, coll. E. L. E. (*N° 2788*), associated with a *Macrosporium*.

Sterile and rudimentery Meliolinea on *Misantheca triandra* (Sw.) Mez (Lauraceae), Peninsula de Samaná, prov. Samaná, Sabana de San Lorenzo, 8.IV.1930, coll. E. L. E. (*N° 3307*), densely overgrown by a Capnodiacea, a

Fig. 90. *Meliola* (*Irenina*) sp. on *Terminalia domingensis*. Mycelium with hyphopodia.

Microthyriacea and, at least, one *Helminthosporium*. Mycelium brown 9—11 thick, septate, branched at right or acute angle, with opposite branches, rarely anastomized; capitate hyphopodia from cylindric to irregular, lengthened, never clearly lobate, but also angled, simple, never spheric, with head cell 15—26 by 10—12, basal cell evident, 4—9 in lenght; without mucronate hyphopodia.

Sterile Meliolinea on *Salmea scandens* (L.) DC. (Compositae), Cordillera Central, prov. Santo Domingo, Villa Altagracia, 7.I.1930, coll. E. L. E. (*N° 2852*), very scanty developed, associated with *Aschersonia turbinata* Berk.

On *Salvia occidentalis* Sw. (Labiatae) (*N° 3313 bis*), glabrous, immature Meliolinea, with very many spheric, ovate or elliptic capitate hyphopodia; the mycelium is densely branched and frequently anastomized forming a dense net-work; ramification of the mycelium more or less at right angle.

On *Scoparia dulcis* L. (Scrophulariaceae), Llano Costero, prov. Santo Domingo, Ciudad Trujillo, banks of Río Ozama, 15.XII.1929, coll. E. L. E. (*N° 2808*), glabrous immature Meliolinea, showing almost spherical, capitate hyphopodia, and large, curved mucronate hyphopodia. Associate with *Helminthosporium* sp.

On *Terminalia domingensis* Urb. (Combretaceae) Fig. 90), Peninsula de Samaná, prov. Samaná, Laguna, Los Bañaderos Prietos, 475 m. ca., 28.V.1930, coll. E. L. E. (*N° 4222*). A parasitized, glabrous, not fructified Meliolinea, with very loose, poorly developed mycelium; capitate hyphopodia not abundant, with a well developed, narrow stalk-cell, and a deeply lobed (as a rule 3-lobed) head cell, with a shape recalling the lily flower of the French araldic. Apparently different from **M. COMBRETI** (Stev.) Cif., n. com. (= *Irenina combreti* Stev.) and from *M. laguncularíae* Earle.

Literature on dominican species of meliolae

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Fragoso Gonzales, R. y Ciferri, R. (1925), Idem, *serie* 1, Ibid., **25**, 356—368. (1925) Idem, *serie* 2, Ibid., 443—456. (1925) Idem, *serie* 3, Ibid., 508—516.

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Toro, R. A. (1927) *Fungi of Santo Domingo, I*. Mycology, **19**, 66—85.

List of the species and varieties recorded in Santo Domingo

abrupta (1*) — aciculosa verbenae (2**) — aciculosa viticis (3*) — acrotricha (4*) — acrotricha diversiseta (5**) — acutiseta (6*) — aegiphilae (7) — agnolae-mariae (8**) — ambigua (9) — ambigua casearíaecola (10**) — amboinensis (11*) — amoena (12*) — amonicola (13) — amphigena (14) — anacardi (15) — andirae (16) — anfracta (17) — angusta (18*) — angusta biserrata (19**) — angusta leptogoni (20) — angusta macracantha (21) — annonacearum (22*) — aracearum (23**) — arachnoidea (24) — argentina (25) — aristata (26) — aristolochiicola (27*) — atra (28*) — atricha (29) — banarae aculeata (30**) — bayamonensis guettardae (31**) — bicornis (32) — bicornis calopogoni (33) — bicornis erythrinae (34) — bidentata (35) — biparasitica (36) — bonaoensis (37**) — bonetii (38**) — borinquena (39*) — burseracearum (40) — buxi (41) — byrsonimae (42) — byrsonimicola (43*) — calatheicola (44*) — calophylli (45) — canellae (46) — capilligera (47) — capsicola (48) — caput-medusae (49) — carbonacea (50) — caseariae (51) — cassiae (52**) — caymanensis (53) — chaethachna (54**) — chiacoccae (55) — ciferriana (56) — circinans (57) — cladacantha (58**) — clavulata (59) — clavulata batatae (60*) — clerodendricola (61*) — clidemiae (62) — coccolobis (63) — colubrinae (64*) — combreti (65*) — comocladiae (66) — compositarum (67) — conferta (68) — consocia (69**) — coronata (70) — coronata triumfettae (71) — crenato-furcata (72) — crescentiae (73) — cucurbitacearum (74) — cuspidata (75) — cyclopoda (76*) — cyclopoda neurolaenae (77**) — cydistae aequinoctialis (78**) — cyphopoda (79**) — dendropemonis (80) — desmodii (81) — desmodii heterochaeta (82**) — didymopanacis (83) — dieffenbachiae (84) — dipholidis (85) — distictidis (86) — domingensis (87**) — durantae (88) — durantae lippiae (89) — earleana (90*) — earlii (91**) — ekmaniana (92**) — ekmanii (93**) — entadae (94) — epiviscum (95**) — erithalidis (96) — erythroxylonis (97**) — escharoides (98) — eugeniae (99*) — evanida (100) — fagarae-martinicensis (101) — fagaricola (102*) — fasciculiseta (103) — forsteroniae (104) — francevilleana abbreviata (105**) — funebris (106) — furcata (107) — furcata coccothrinacis (108) — gaillardiana (109*) — garciniae (110*) — glabra (111) — glabroides (112) — gliricidiae pinetori (113*) — gregoriana confusa (114**) — guareae (115*) — guareicola (116) — guignardii (117) — gymnanthicola (118*) — haploa (119**) — hernandiacearum (120**) — hibisci (121) — hispaniolensis (122**) — hurae (123) — hymenaeicola (124) — hypodoria (125**) — hyptidicola (126) — ilicicola (127) — inermis (128) — integriseta (129) — intricata (130) — ipomoeae (131) — irregularis (132*) — isertiae (133) — isochaeta (134) — ixorae (135*) — jatrophae adeliae (136**) — juruana (137*) — kaduae (138*) — kerniana (139) — krugiodendri (140) — lagerheinii (141) — laguncularíae (142) — lictorea (143) — lisianthi bisgoeppertiae (144*) — lonchocarpi (145*) — lonchocarpicola sancti-dominici (146) — longipoda (147) — longistipitata minor (148**) — lucumae (149*) — macropoda (150) — magnoliae illici (151) — malacotricha (152) — manca (153) — mangiferae (154) — mappiae (155) — marantae (156) — marcgraviae (157*) — mataybae (158*) — mataybae longiaristata (159**) — mayaguesiana (160) — mayaguesiana dominicana (161**) — mayepeae (162) — meibomiaecola mucunae (163**) — melanochaeta (164**) — melastomacearum (165) — merrillii (166) — miconiae (167) — miconiaeicola henrietellae (168) — mikaniae

(169) — moelleriana (170) — moelleriana sidicola (171) — monensis (172) — monilipes (173) — monopla (174) — mouririae (175) — myriopoda (176) — niessleana (177) — nigra (178) —

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